DUN'S REVIEW and Modern Industry

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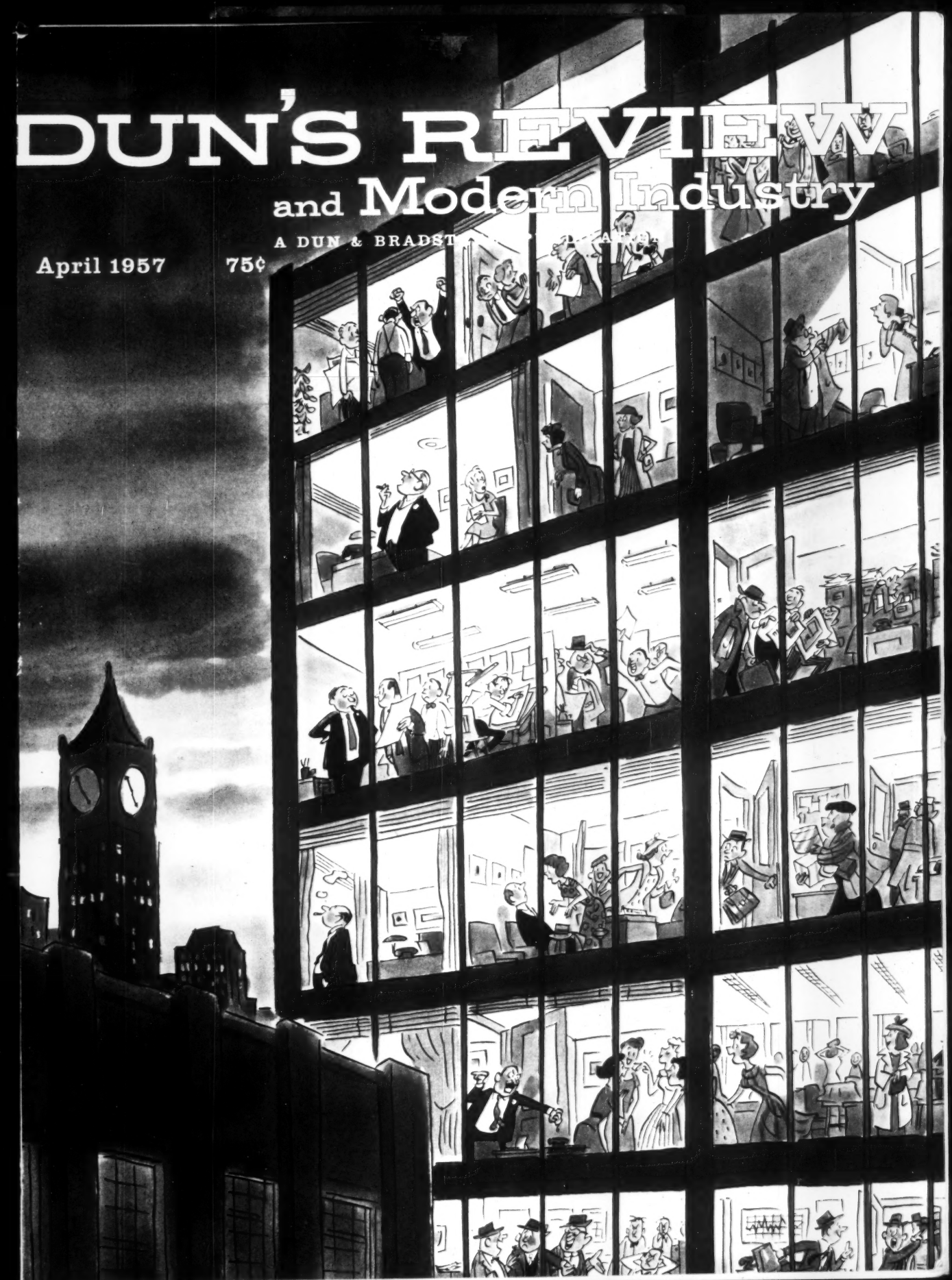
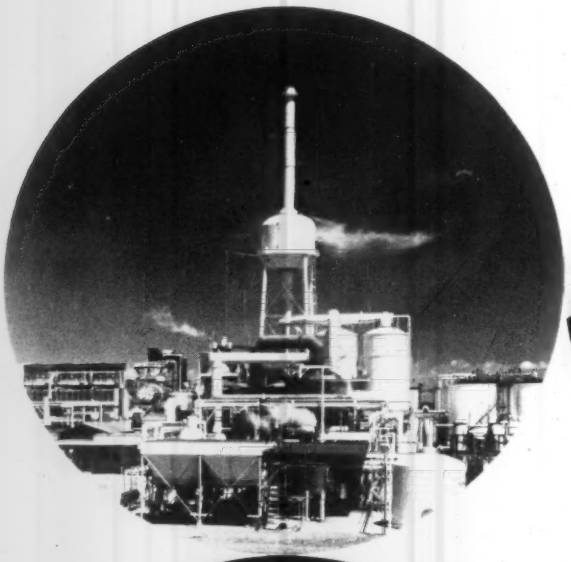
April 1957 75¢





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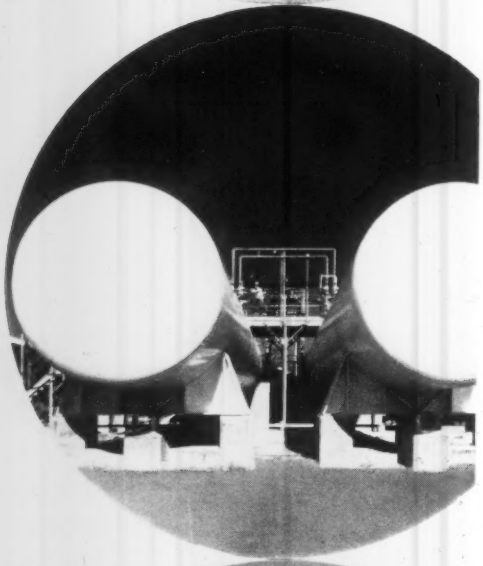

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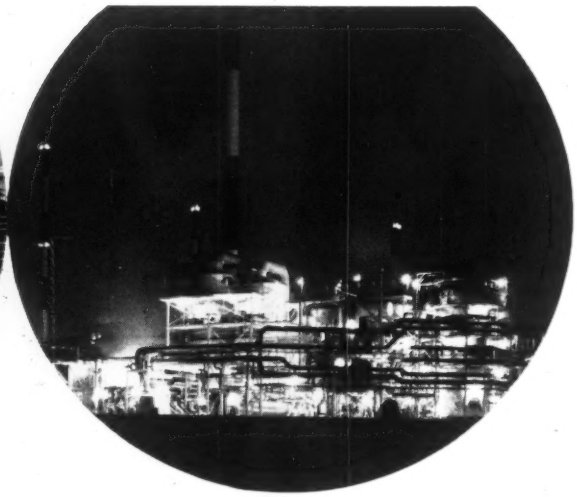

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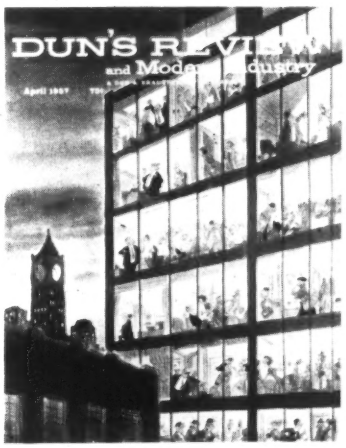

This month's cover, especially executed for the magazine by Bud Blake, served as inspiration for our excursion into poesy on page 2 and more serious discussions of office problems on page 41 and page 55.

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DUN'S REVIEW AND MODERN INDUSTRY, April 1957, Vol. 69, No. 6. Published monthly by Dun & Bradstreet Publications Corp., J. Wilson Newman, President. Publication Office: 300 West Adams St., Chicago, Ill. Editorial, Advertising, and Subscription offices: 99 Church St., New York 8, N. Y.. Entered as second class matter at the Post Office, Chicago, Ill.

Address all correspondence to the New York office. Subscription: $5 a year in USA and Possessions, and Canada. Elsewhere, $10. Single copy, 75 cents. Please state title and employing company when subscribing.
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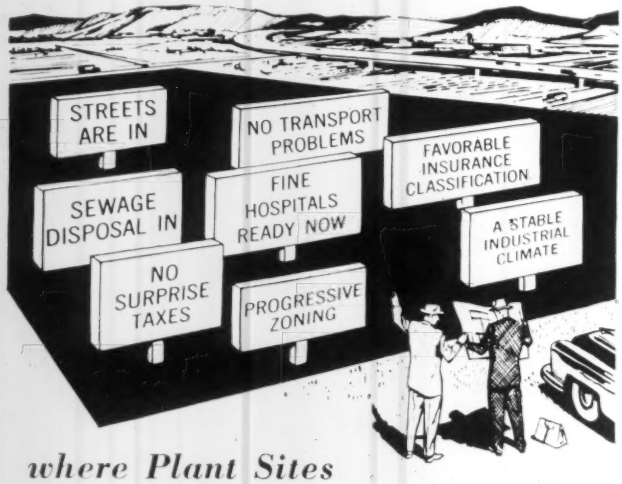

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• Our cover this month gives us a candid glimpse of a typical office building at quitting time. If business life is grinding to a sudden halt, the social life of the city is about to alert itself; and buses, trains, ferries, and subways will begin the prodigious task of getting the office people home to dinner. The office is a lonely place when only the charwomen and the night watchman move around on their chores. All of which evokes these lyric musings:

Life begins at five of five
When money-makers close the vault
And drone and worker call a halt
To business in the buzzing hive.

And as the chimes speak from the tower,
Swarm after swarm zigzag in flight,
Till the sky is drained of light
In the neon-tinted hour.

And silence comes as echoes mock
The far-off words with honeyed sound.
And bat-winged shadows spin around
With the long hand of the clock.

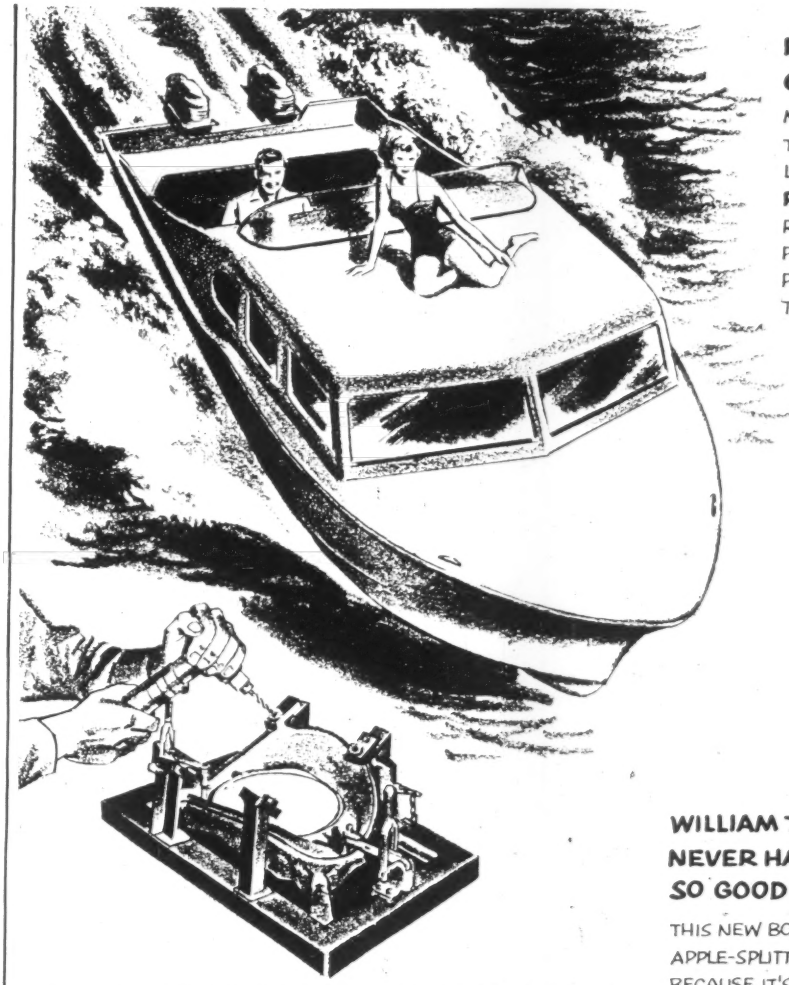
• Paul Wooton tells business men, "Don't go to Washington with your problem until you have tried to find the answer at home." Washington, to be sure, has hundreds of sources of information, but there is a limit to what they can do, or should do.

If you must go to Washington, and you have already seen the Corcoran Art Gallery, the Smithsonian, the cherry trees along the Potomac, Congress in session, the White House, and the Pentagon, make sure you won't waste time on a foolish errand. Get your facts straight, your agenda lined up, your appointments set up, and your objective clearly established. Washington can be a city of lost souls when business men try to take it by storm, either in pursuit of personal goals or in eloquent approval or dissent on a public issue.

Wooton warns us: "Know where you are going, and whom you are going to see, and make sure he knows it too."

• The next best thing to knowing the right answer is knowing how to

New Miracles with Glass Fibers!



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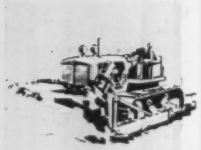

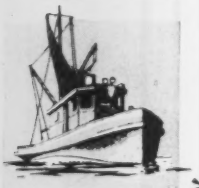

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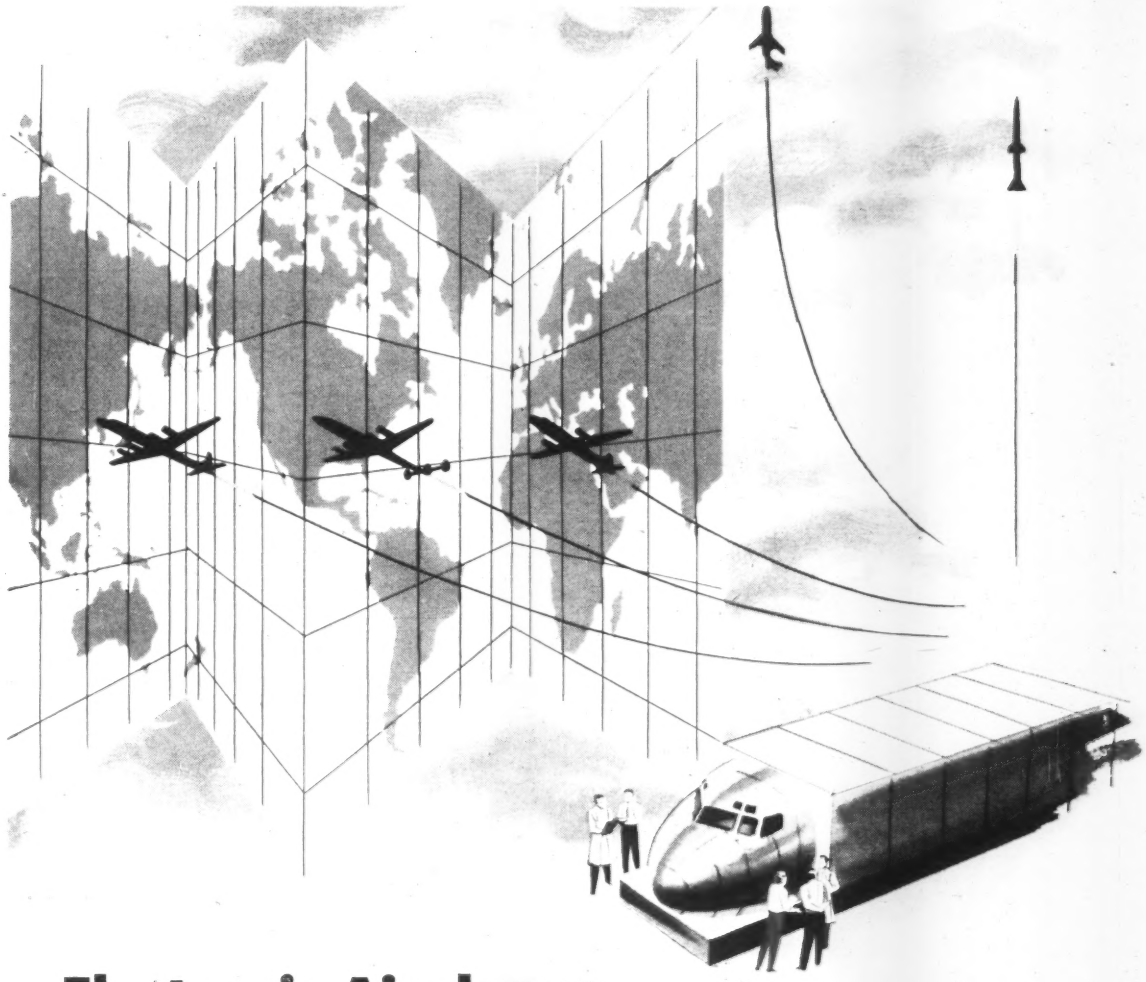
ask the right question. Any skilled researcher, seeking unbiased information, recognizes that the framing of a fair question is an art that challenges the man of honest intent. He is also aware that the framing of the slanted question is the artifice of the special pleader. Communication begins with the desire to be understood, but many business men involved in litigation, labor disputes, and stockholder wrangles have learned that the statement of a simple fact is not a simple matter.

More time is often wasted in reducing issues to a simple denominator than in solving the problem once the issue is defined. Many barriers to agreement fall apart once a set of definitions is accepted. Of course, some debaters at conventions, trade discussions, and public hearings are exhibitionists with a captive audience. They don't want answers; they just want attention. Yet it is often apparent that business men speaking the same language don't understand each other.

Good communication is still a primary business necessity, and precise meanings come with a desire to be understood. If the will is there, the right words should follow without too much verbal sparring. During 1957, we expect to talk about communication from various vantage points, especially through contributors who are students of industry's communication problems.

• In an early issue we will introduce THE PRESIDENTS' PANEL, a new bi-monthly feature which will present composite views from the corporate bridge deck. The Panel, composed of the presidents of representative companies, will have a wide management terrain to consider, but will be disciplined in topic selection by ideas which warrant the top executive's specific attention.

The Panel will explore, among other things, the careers, personal interests, goals, and day-to-day problems of company chief executives. Such subjects as long-range company planning, decision-making, executive retirement, delegation, and business ethics will come in for their share of discussion. Invitations were mailed out this past month, and the percentage of acceptances exceeds expectations. Names of participants and their companies will be announced in the first Panel report. —A. M. S.



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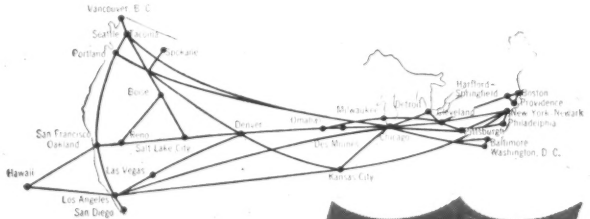
*These are the rates for many commodities. They are often lower for larger shipments. Rates shown are for information only, are subject to change, and do not include the 3% federal tax on domestic shipments.



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ATTEMPTS BY the Treasury and the Federal Reserve to preserve the purchasing power of the dollar are being made increasingly difficult by the operations of other Government agencies, particularly those in the housing field.

The $100 billion home mortgage debt is more than one-third the size of the national debt. It is three times greater than the installment debt and about equal to the long-term corporate debt. This heavy home mortgage debt has put a great burden on an economy characterized by an excess of demand for credit over the supply of savings. When the housing agencies call on the Government to relieve a particular situation, the Treasury has to go into the market and borrow money. Thus it has less surplus from which to retire debt.

Both the Administration and Congress are being blamed for permitting the unsound practice of borrowing short-term money for 30-year mortgages, as the Federal National Mortgage Association is doing. Since the increase in interest rates, FNMA purchases have increased from $12 million a month to more than $100 million a month. This has been a real deterrent to the Treasury and Federal Reserve programs intended to promote sound economic growth within the framework of a relatively stable price level.

The Small Business Administration, on its way to become another RFC, is making a large aggregate of loans to a particular group and is adding to the excess in demands for credit. Officials feel that the President should instruct the Urban Renewal Administration to slow down its work of destroying existing housing and replacing it with new buildings, thus bidding up the prices of materials and adding to the shortage of construction workers.

The Federal Housing Administration does not use Government money, but it permits down payments that are too small and stimulates building that should be deferred. The Veterans Administration operates along similar but more radical lines. The Public Housing Administration is not helping the situation by making tax-exempt money available under a Government guarantee when the Government's own securities are taxable. Then, too, there are more tax-exempt securities outstanding than can be absorbed. The result is that PHA has to pay as much for money as would be the case were its securities taxable. To confound the situation even further, defense spending has gone forward at a much more rapid rate than had been estimated.

All of this means that the Treasury has to continue tapping the short-term market. The Federal Reserve is reluctant to make the Treasury offerings too difficult; so it hesitates to draw the rein as tight as it would otherwise.

The President himself promises to reduce or slow down expenditures as may be indicated by a special study being made by his staff.

Corporate profits in 1956, it will be recalled, showed no increase over those of 1955, although the gross national product increased by $21 billion. This, coupled with the opposition of the Administration and Congress to tax relief, has caused widespread disappointment. The disappointment was keener because the Treasury had estimated a $1 billion increase in corporate profits. Incidentally, senators and representatives have received an unprecedented number of letters urging a reduction in expenditures. Costs that were increased last year were not passed on immediately. Those increased costs have, however, been added to 1957 prices, with the result that consumer purchases in various lines have slowed down.

Practically all officials agree that neither corporate debt nor consumer credit is too high, and that inventories are not out of line. If trouble comes, they say, debt will not be the cause. If difficulties develop, they will be due to consumers' refusal to purchase because of the feeling that prices are too high.

No one was more anxious than the President to reduce expenditures, it was said at the Bureau of the Budget, but he was unwilling to gamble on defense. Only reduction in terms of billions of dollars would do appreciable good, and the only place cuts in that amount could be made would be in defense items. A 10 per cent reduction in individual income taxes would mean a revenue loss of 3.5 billion.

Officials have made up their minds that the inflationary effects of wage increases are inevitable when there is full employment. Few employers will hold out against demands when the increase can be passed on. It is felt, however, that, with increased productive capacity becoming available and with some leveling off in

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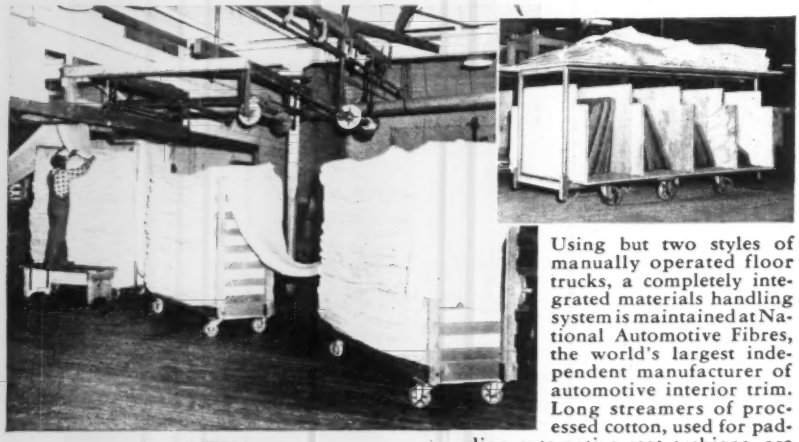

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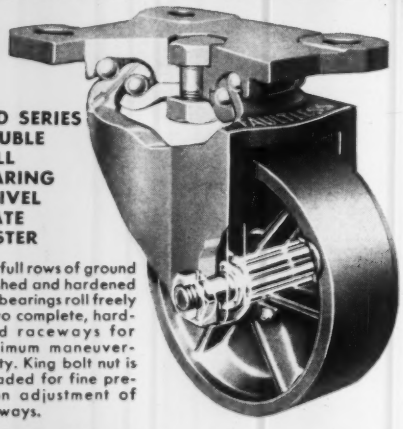

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demand, the price rise will come to an end soon.

Indications are that housing starts will fall below the 1 million mark this year. This decline of a few hundred thousands from the peak will probably have little effect on the general economy, particularly since other construction, including roads, will bring the total to an annual rate of around $45 billion—the highest rate ever attained with the exception of two months in 1956. It is admitted that the decline in residential construction has had local effect on industries producing dimension lumber and other materials and supplies used mainly for home building. Proposals to invest National Service Life Insurance funds in guaranteed mortgages are strongly opposed. Funds in that account are fully invested in Government securities. To raise cash for the purchase of mortgages would mean additional Treasury borrowing, thus reducing available funds for private investment.

An offsetting factor in the calculation of cost-of-living figures has occurred to some of the specialists in the Commerce Department. Three million fewer domestic servants are employed as compared with the prewar period. This has been made possible by the availability of frozen and precooked foods. The grocery bill is larger but expenditures for domestic service are less.

Farmers are having growing difficulty securing adequate labor. The drift of farm labor to the cities continues. Now competition is coming from a new source. The movement of industry to rural locations brings competitors closer. Logging and pulp wood operations are affected as much as agriculture.

A rising tide of protests against imports is flooding Capitol Hill. Copper tubing from Germany and plywood from Japan, which are crowding out the higher-priced domestic product, are examples of the imports which are arousing the complaints.

Success in persuading Japan to limit its exports of textiles to the

United States has prompted a request for another voluntary agreement. Japan, Great Britain, and the European coal and steel community have been asked by the Commerce Department to limit purchases of heavy melting scrap iron. Shortage of that type of scrap, it is feared, might affect domestic steel output. It is unusual to request friendly nations not to buy in the United States. Ordinarily the desire is that they sell us less.

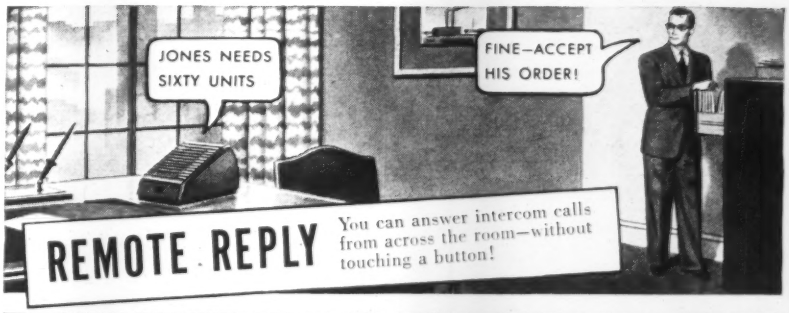
France apparently is facing another financial crisis. To say the least, this will not help world or domestic economies. As anxious as the Administration is to help France, it has gone about as far as it can in extending financial aid. France already is heavily indebted to the International Bank and the Export-Import Bank and has had a disproportionate share of foreign aid. Its reserves of gold and foreign exchange have diminished. The French Government is disinclined to increase taxes. Even if it did, collection probably would be impossible. In the face of all this, few reductions have been made in French spending.

If costs stay at the present level, the mileage of the new interstate road project will be reduced by one-third, according to a Commerce Department estimate. More than materials is involved. Costs of acquiring rights-of-way have risen spectacularly.

Despite difficulties in recruiting competent examiners, the Patent Office is making headway against its backlog of pending applications for patents. Pendency time has been reduced to three years and four months. A goal of two years has been set, but its attainment depends on the varying volume of applications, on finding examiners, and on increased Congressional appropriations.

Paul Wooton

WASHINGTON, D. C.



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SAVE TIME—get more work done!

Thanks to Executone's "Remote Reply," employees can now answer calls without interrupting their work. You get *instant* response without loss of working time. You eliminate waiting and costly "call backs" when phones are busy. Roving employees are located quicker. You give instructions, get information without delay, yet you have "privacy protection" at all times. Work flows smoothly. Every hour becomes more productive! Executone soon pays for itself in many ways. Ask for full details. No obligation.

*U. S. Pat. No. 2,744,966

GET THE FACTS

Executone INTERCOM SYSTEMS

EXECUTONE, INC., Dept. W-2 • 415 Lexington Ave., New York 17, N. Y.

Without obligation, please send me full data on Executone Intercom. I am particularly interested in:

☐ INTER-OFFICE COMMUNICATION
☐ INTRA-PLANT COMMUNICATION
☐ SWITCHBOARD RELIEF
☐ LOCATING PERSONNEL

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Title.....
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In Canada—331 Bartlett Ave., Toronto

The battering of rushing water and silt is resisted by a paint coating made with BAKELITE Vinyl Resins. Used on locks and dams on the Mississippi River, it protects metal gates and underwater structures against wear and rust. Fast drying and long life are essential. Toughness and dependability are features of many kinds of coatings made with BAKELITE Resins . . . from quick-drying latex paints for your home interior, and coatings for masonry that seal over cracks, to protective linings for food cans and paperboard milk cartons.

Underground sprinkler systems cost less and last longer with pipe made of BAKELITE Brand Polyethylene. It won't rust. It's so light in weight one man can carry hundreds of feet with ease. Since it's installed in long lengths, few fittings and connections are needed. Its toughness and elasticity minimize danger of freeze-up damage, and the need for deep trenches. All these advantages make it easier for farmers to afford more water piping for watering stock and irrigation. And they reduce capital costs and upkeep for watering parks, golf courses and similar developments.

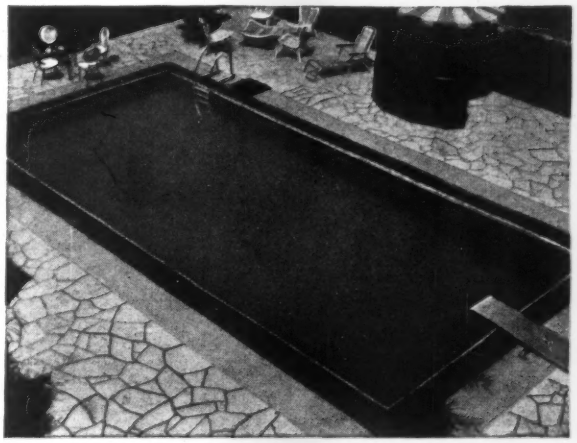
With the help of BAKELITE Plastics—

Water...when and where you want it!

Modern plastics find broad new applications in irrigation . . . flood control . . . storage . . . waterproofing—for public works, industry, on the farm and for the home.

Whether they're helping to solve water problems, or any of hundreds of other jobs, BAKELITE Brand Plastics are at work in just about every field imaginable. At Bakelite Company you'll find hundreds of different plastics. You can meet your exact needs through an almost unlimited variety of combinations of useful properties.

Whether you wish color, light weight, chemical resistance, flexibility, or any of many other material advantages, BAKELITE is your largest storehouse of plastics with which to build better products for business, industry and the home. Phenolics, styrenes, impact styrenes, polyethylenes, vinyls, polyesters, silicones, and epoxies are all available at this one convenient source of materials . . . plus a wealth of experience to help others use plastics to their greatest advantage.



Fun for the whole family! A pool liner made of tough, yet flexible KRENE sheeting can be installed at reasonable cost and at the same time enhance the value of your home. Such economical installations make pools of this type ideal for family use. Noted for consistent high quality, KRENE is also used for shower curtains, raincoats, water-repellent upholstery and wall coverings.

To keep water from seeping through the cellar floor, a moisture barrier film made of tough BAKELITE Polyethylene is laid on the ground, and the concrete floor poured on top. Unaffected by lime or soil acids, the barrier is permanent. Polyethylene film is also used to package fruits, meats, and vegetables to keep in flavor-protecting moisture . . . as glazing for economical shatterproof greenhouses . . . or trenches to hold water for irrigation.

DID YOU KNOW: Sparkling clear drinking tumblers that bounce but don't break are made of another BAKELITE Plastic? It's called C-11. In rough day-to-day use in a medical institution, C-11 tumblers lasted up to 8 times longer than conventional ones.

First in the world of plastics

BAKELITE BRAND PLASTICS

BAKELITE COMPANY, *A Division of Union Carbide Corporation* UCC 30 East 42nd Street, New York 17, N. Y.

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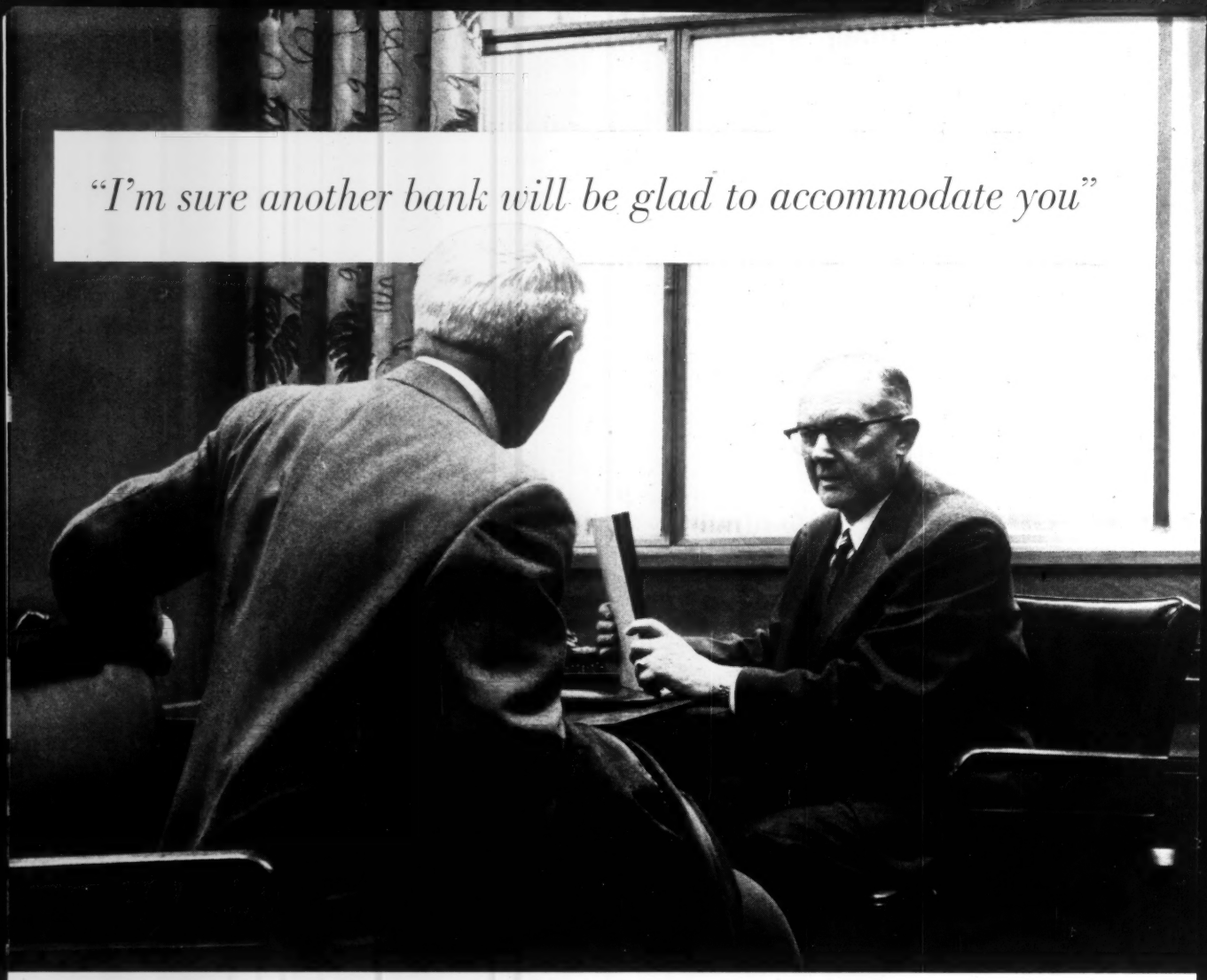

"That's all well and good," Peterson's thinking, "if there *were* any other banks." But he's been to them all. And no one wants to lend him the money.

Yet his plant is full of orders. Substantial ones, too, considering its size. Trouble is, most of them are unfinished . . . still in-process. Result: a weak cash position. And, these days, bankers shy away from *that* kind of risk.

If only Peterson had known about the Keysort Plant Control Plan! With daily PCP reports before him, he could have held in-process inventory to a minimum. The tighter scheduling made possible by PCP would have speeded and steadied production flow. Result: earlier deliveries, cash coming in faster, a sounder borrowing position.

With just five fast, accurate Keysort PCP reports—1 daily, 2 weekly, 2 monthly—you can obtain complete modern management control of your business and your profits. At remarkably low cost.

The McBee man has a presentation which will show you how it's done. Phone him, or write us for illustrated folder containing an example of each report.

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WHO SHOULD DO WHAT ABOUT INFLATION?

Where does responsibility for control of inflation actually lie? Is the rising wage-price spiral a result or a cause? Are Federal Reserve controls on credit enough? Here are some specific answers from top management, as reported to Grover Amen.

JAMES F. LINCOLN

Chairman of the Board
The Lincoln Electric Company

What really causes inflation? The reason for it is obvious. Our taxation policy forces a cheaper dollar on us. Industry must increase its prices tremendously because 52 per cent of its income is taken by the Government. All individuals also have a very large part of their income taken by taxation. Obviously, this amount of money must be obtained from whatever source it can come from, in the case of both individuals and companies. Therefore, industries must demand higher prices and workers must demand higher wages—far beyond the value they produce.

If we want to control inflation we must control the Government spending that makes the high taxes necessary; and the major part of Government spending is for war. We plan to be powerful enough to bluff Russia and her satellites into doing what we want. We also are attempting to bribe a great many of the so-called free countries. No one can consider such a program without concluding that there is a much better answer.

Why do we not recognize that we must live in peaceful co-existence with all nations and take the steps necessary to have such peaceful co-existence? If we should trade with Russia to the extent of $1 billion per year each way, there would be no threat of war, because each nation would be anxious to court the goodwill of its customers in the other nation.

ALFRED C. NEAL

President
Committee for Economic Development

Governments at all levels, businesses, and consumers all want to spend heavily beyond current incomes. All tend to run into debt. The demand for loans has been exceeding the amounts saved, and the banking system has been expanding loans by creating new deposits, new money.

The situation described is ideal for maintaining steady growth in the economy so long as the creation of new money is held in check. The economy is like an automobile with a great reserve of horsepower—power and speed are there when we need it, but unwisely used, they can wreck us.

The control over this excess horsepower is in Government. By releasing controls over the supply and cost of money, it can let out a surge of power; by holding back, it can keep us going ahead at a safe speed.

To do this Government must hold spending down and produce a budget

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surplus in inflationary periods to offset over-spending by other parts of the economy. Government must exercise a monetary policy that prevents over-borrowing and over-spending by other elements of the economy.

ROBERT R. YOUNG
Chairman of the Board
New York Central Railroad

Federal Reserve discount rate increases—or any other method of increasing the cost of credit—cannot control inflation. Increases in interest rates may actually be a cause rather than a cure.

If, for instance, you knock automobile sales down by restricting consumer credit, all you do is reduce factory volume; and the increasing overhead increases prices. The same law operates in housing, furnishings, appliances, and elsewhere; for ours is an economy of abundance, not scarcity, and prices can be held down in the face of spiraling wages only by increased volume and productivity.

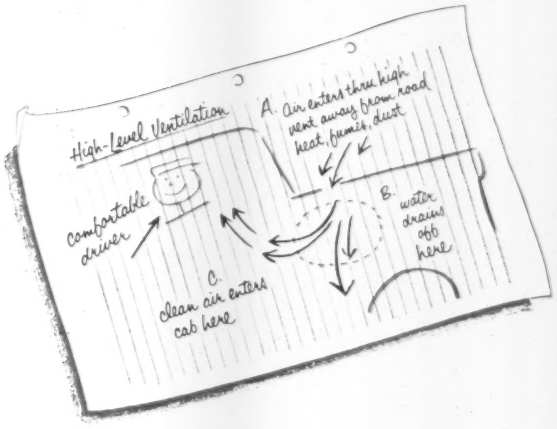
In all their talk about controlling inflation through the manipulation of the rediscount rate, I have not heard our fiscal authorities once mention the real inflationary forces—the wage spiral, taxes, and the export of capital, which proceed unabated. To cut inflation, Government must first cut taxes and stop squandering abroad our essential resources.

BERN DIBNER
President
Burndy Corporation

Two primary actions contribute to the process of inflation. One is the raising of prices of commodities without corresponding increase in value; the other is the increase in apparent wages without equivalent increases in production. Both stem from a common source—monopoly in the control of prices and wages.

In the case of unwarranted advancing prices, the controls in major anti-monopoly legislation, sound trade practices, self-disciplined trade or-

in a Chevy cab, even the air is better!


High-Level Ventilation
A. Air enters thru high vent away from road heat, fumes, dust
comfortable driver
B. water drains off here
C. clean air enters cab here

...more evidence that Chevrolet Task·Force Trucks are engineered better and built better for bigger savings!

These cab features give you extra comfort and safety behind the wheel, extra savings on truck maintenance. And they're proof that the most modern trucks for your money are Chevrolets!

The drawing "doodled" above shows how Chevy's High-Level ventilation provides a *comfortable* interior . . . and the numbers in the big picture point out other advantages equally as good to have around you when you haul! They include:

(1) *A roof that's specially built for safer, more comfortable hauling.* Sturdy all-steel construction adds to safety; roof's unique inner reinforcement insulates the overhead against heat.

(2) *A gleaming, durable baked enamel outside finish.* Here's the reason your Chevy's exterior will resist wear better, look like new longer! This handsome finish is available in a wide variety of colors.

(3) *A Nu-Flex seat that beats the bumps!* Deep-comfort coil springs, metered air shock damping and 3-way adjustment let you take it easy on tough jobs!

(4) *A cab that's rustproofed to last!* Doors and similar surfaces are rustproofed on the inside as well as on the outside by immersion.

(5) *Concealed Safety Steps for convenience.* Inside each cab door, they give you firmer footing, make entering or leaving the cab easier and safer.

(6) *An undercoated floor, cowl side panels and fender flanges.* Virtually all exposed surfaces on the underside of the cab are protected by an anti-rust coating.

(7) *A non-glare instrument panel to make driving safer!* The textured finish on upper portion of Chevy's instrument panel reduces blinding sun reflections, minimizes eyestrain.

(8) *A reliable 2-speed electric windshield wiper* on each side.* Powered by electricity, their action remains *constant* under all conditions.

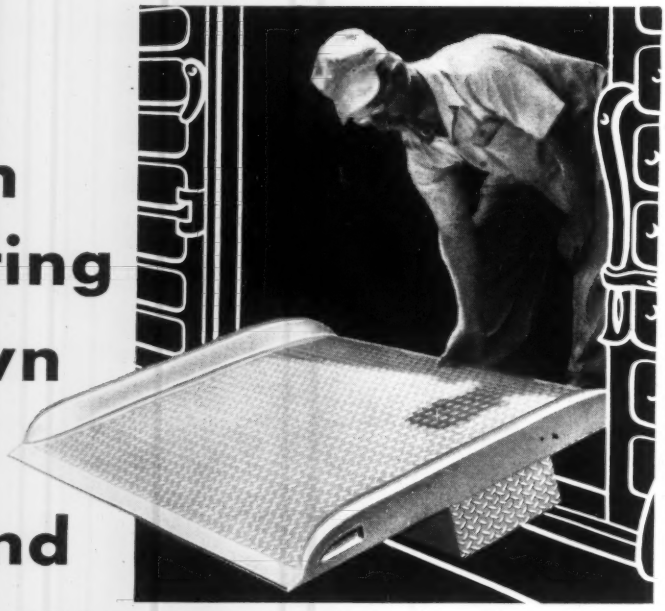
Such advantages as these (we've shown only a few) combine to make *everything* better in a 1957 Chevrolet truck! You'll see for yourself when you visit your Chevrolet dealer's. . . . Chevrolet Division of General Motors, Detroit 2, Michigan.

**Standard in Series 5-6-7-8-9-10000 models.*

. . . biggest sellers because they're the biggest savers! CHEVROLET

CHEVROLET TASK·FORCE 57 TRUCKS

man putting down a sound investment



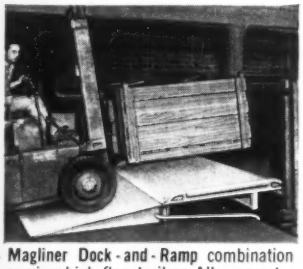
. . . ONE THAT WILL SPEED LOADING AND KEEP COSTS DOWN

This company has made a wise investment—one which will pay dividends over a long period of time! The man above is putting a Magliner magnesium dock board in place on the company's dock. This new Magliner will speed loading . . . get more out of power trucks and other loading equipment . . . keep costs down. Made of light, strong magnesium, the dock board is easily moved and positioned by one man. No heavy lifting . . . no risk of physical injury, it will protect men, loads and equipment against accidents and costly damage.

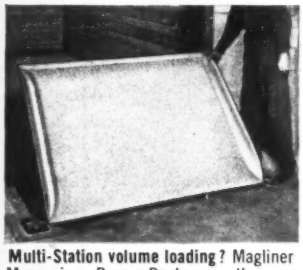
Magliner magnesium dock boards are designed to meet both ordinary and out-of-the-ordinary loading conditions . . . eliminate costly delays and bottlenecks . . . make loading costs go down! Engineered and built *to take it*, they safely handle loads up to 20,000 lbs.

Magliner dock boards will pay other big dividends, too. They are low in initial cost and because they provide dependable, long-life service with less maintenance, they give you greater economy ALL-ways.

Find out today, how Magliner magnesium dock boards can cut loading costs in your operation. Write for Bulletin DB-204.



Magliner Dock-and-Ramp combination services high-floor trailers. Allows greater rise . . . longer slope . . . safer loading. Dock board may be used independently.



Multi-Station volume loading? Magliner Magnesium Perma-Docks are the answer. A low cost, permanent installation.

MagLiner MAGNESIUM DOCK BOARDS

- **Tire-Saver safety curbs**—prevent truck run-offs and stop power truck tire damage. An exclusive Magliner feature.*
- **Beveled edges**—avoid hazardous load jar, eliminate equipment damage and load loss.
- **Rugged, permanently attached understructure.** Fits snugly between dock and carrier—provides positive, automatic position-lock.
- **Triple strength curb ends***—double tapered for wide angle turns.

*Patent Pending

SEND YOUR NAME AND ADDRESS FOR A COPY OF BULLETIN DB-204, TO MAGLINE INC., P. O. BOX 14, PINCONNING, MICHIGAN.

ganizations, and, most important of all, the accepted view that lower prices spell larger markets, all are controlling influences against inflation. And real competition is recognized as the best antidote of all.

WILLIAM M. SPENCER

Chairman of the Board
North American Car Corporation

Control of inflation is equally the responsibility of Government, labor, and business. Let us be realistic, however. Business operates in a profit and loss economy in which prices are, or should be, dependent upon the forces of supply and demand. The business man is in business to make a profit, and it is essential that he do so. But it is wrong for a company making unusually high profits to increase prices just because labor demands higher wages. If the business man would reduce the price of the finished products and perhaps show a lower profit, this would be a strong deterrent to labor's demands for higher wages. If this practice could only be initiated by a leading industry, the spiral of inflation could eventually reverse itself.

JOHN D. DALE

President
George Elliott Company, Inc.

Inflation results from all wage increases that have no relation to productivity. With materials costs as well as fixed costs continuing to rise, most managements feel they simply have to raise prices.

But there are other choices. One of the best is through effectively conceived wage incentive plans. If such plans are successful—and a surprising number of them are—productivity can keep pace with wages, and consumer costs can stay in line.

Some managements shy away from any suggestion of an incentive plan, believing that the union will cry "speed-up" as a matter of policy. But hundreds of companies have achieved good incentive plans with wholehearted union cooperation.

I foresee a safe journey

...thanks to

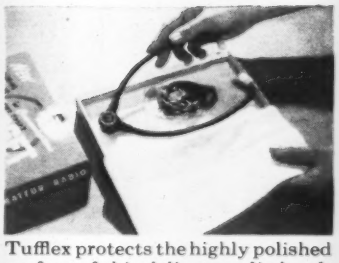
TUFFLEX packaging

The package in the picture could be any size or shape, contain any kind of product. The big news is hidden inside. It's a new protective packaging material that reduces shipping damage, cuts packaging costs, for scores of shippers.

The name is Tufflex—in two basic product types—a felted cellulose fiber cushion padding and a non-woven conforming fabric.

The important fact about Tufflex is its tremendous versatility. Soft, impact-resisting Tufflex is ideal for flotation, surface protection, pressure-point padding. It can be moisture resistant or moisture absorbent, as you want it. It's excellent for thermal-packaging—protects against heat or cold. A complete range of types and thicknesses gives you the exact protection you need.

Get the facts about Tufflex...find out how shippers are saving money, cutting costs with this new protection. Wood Conversion Co., Dept. 239-47, First Natl. Bank Bldg., St. Paul 1, Minn.



Tufflex protects the highly polished surface of this delicate radio headset. Today, Tufflex products are used for packaging everything from canoes to lettuce.

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The lady who didn't talk

Once, in the course of the intricate negotiations which are always involved in locating a major industry, we found it necessary to take some responsible local citizen into our confidence. The person who could help us most was the editor of the paper.

At first our client was highly skeptical. He just didn't think any editor could be trusted with an interesting secret. And to make matters worse, this editor was a woman!

But we had complete faith in the lady, and the client accepted our judgment. For two years, while all the details were worked out and site options obtained, this was the best-kept secret in town. And at the end of the two years the lady editor was rewarded with one of the biggest scoops of her career.

The people of C&O's Industrial Development Department know their territory. They know its history, its geography, its economics and its people. They know who to trust and when to be cautious. They can count on cooperation that no stranger could ever get.

If you are looking for a site, let this Department help you. You will get every possible assistance, and your inquiry will be handled in complete confidence.

Write for new booklet describing industrial resources and opportunities in C&O territory. Address: Wayne C. Fletcher, Director of Industrial Development, 3202 Terminal Tower, Cleveland 1, Ohio.

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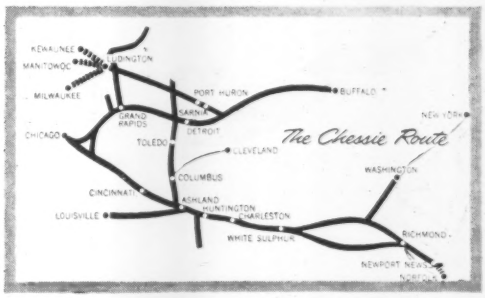
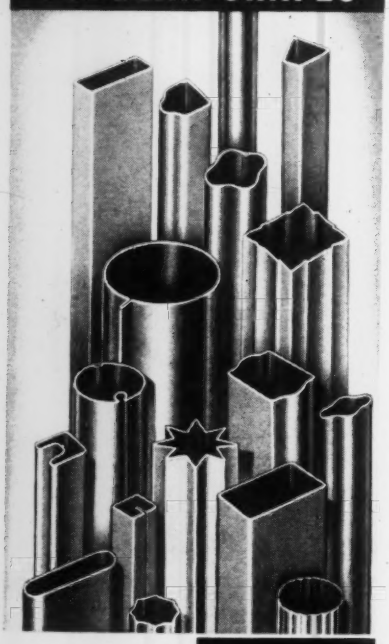
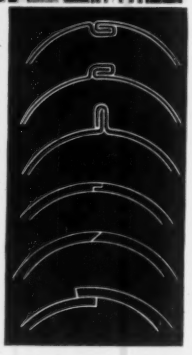


COLD ROLL FORMING TUBULAR SHAPES





Among the wide variety of things you can make on a Yoder Cold Roll Forming machine are round, square, oval, rectangular and other tubular shapes, such as illustrated. The seams may be open, lapped, butted, dovetailed, interlocking, etc. as shown in the drawing.

Millions of feet of such unwelded tubular shapes are made from coiled strip for conductor pipe, bedsteads, lamp stands, window channel, wiring raceways, carrying rods, etc. Production ranges from 20,000 to 50,000 feet per day, with only one operator and a helper.

Yoder offers you the cooperation of their engineering staff for designing and adapting their cold roll forming machines, auxiliaries, and tooling, for the low cost production of structurals, mouldings and trim, panels, tubular and other shapes, to meet individual needs.

The Yoder Book on Cold Roll Forming is a complete, illustrated text on the art and the equipment needed for performing a variety of operations which can be combined with cold roll forming, at little or no extra labor cost. A copy is yours for the asking.

THE YODER COMPANY
5531 Walworth Ave. Cleveland 2, Ohio

YODER ENGINEERING CONSTRUCTION

COLD-ROLL FORMING MACHINES

FAILURE: A DEFINITION IN PERSPECTIVE

FAILURE, like success, is a relative term, and its significance can be measured only in time's perspective. The definition applies to business, politics, science, religion, and sociology. Columbus died in disgrace, having failed to find the Ind and its fabled gold. Newcomen's steam engine failed because of elements beyond his control, but his name is a symbol of the Industrial Revolution, which changed the social order of the world. Kelly, who invented the revolutionary method by which iron is converted into steel, died penniless, and his name isn't even associated with the process. History is replete with cases of failures who paved the road to success for others. A recent incident recalls the story of the political failure of Henry Clay.

Last Fall, a DUN & BRADSTREET staff member discovered a picture of Henry Clay in a miscellaneous collection purchased at a town auction in northern New Jersey. When he removed the frame, a letter, signed by Clay and addressed to a Jacob Strattan of Philadelphia, fell out. Dated September 13, 1842, the letter is a reply to certain political questions, and among other things it recommends these perennial objectives:

> "A sound National currency, regulated by the will and authority of the Nation.
>
> "An adequate Revenue, with fair protection to American industry.
>
> "Just restraints on the Executive power, embracing a further restriction on the exercise of the Veto.
>
> "An amendment of the Constitution, limiting the encumbent of the Presidential office to a single term."

Henry Clay was a dominant figure on the American political scene for nearly 50 years, many of which he spent in Congress as a shaper of national destiny. The infant industry of America struggling for recognition and support was much indebted to Clay when it needed both protection and patronage. He coined the phrase, "I'd rather be right than President," and the voters took him at his word and protected his virtue at the price of his ambition. A quadrennial candidate for the nomination from 1824 to 1848, he lost out to lesser men.

Clay failed to achieve a personal goal, but was he a failure? The man who was beaten by Andrew Jackson in 1832 lost the nomination to William Henry Harrison in 1839, was beaten by James K. Polk in 1844 and by Zachary Taylor in 1848. The comparative talents of Clay and Jackson may be debated, but who will measure the achievements of Clay, as the stalwart defender of the Union, the champion of American home industries, and an unselfish servant of government, against the mediocrity of men whom a fickle populace selected? Some men have brought greatness to the office of President—specifically, Washington, Jefferson, and Eisenhower. Others, notably Lincoln, have found greatness in office. Grant and Harding lost stature in the Presidency. Others—namely, Wilson and the two Roosevelts—have still to be appraised in the light of their influence on world affairs. Failure, like success, is subject to revised estimates in the eyes of posterity.

Though Henry Clay and Daniel Webster never attained the high office of the Presidency, their names have a brighter luster than those of many residents of the White House. On the industrial front, individuals like Steinmetz, Carty, and Kettering have been significant, not as officers of a company, but as servants of an industry. Each overcame serious obstacles, and their fame rests on services rendered to the whole community. —A.M.S.

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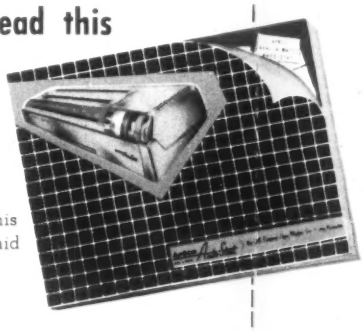

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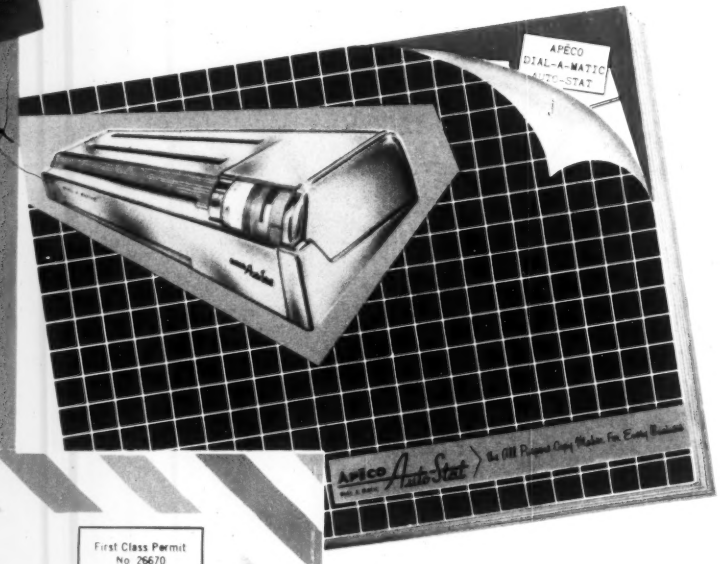

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HIGHLIGHTS *and sidelights*

comment by

Hanesta R. Gardner

Lest we forget

The speed and efficiency with which we turn engineering ideas into mass production sometimes leads us to forget that the ideas themselves are not all ours.

Perhaps it's good to stop occasionally and remember the debt we owe to others. For instance, we have done a great deal with synthetic rubber, radar, television, and such synthetic fibers as acetate and the new polyesters. But we did not originate them.

Synthetic rubber was a German development; acetate came from France; and radar, television, and the first polyester fiber from Britain.

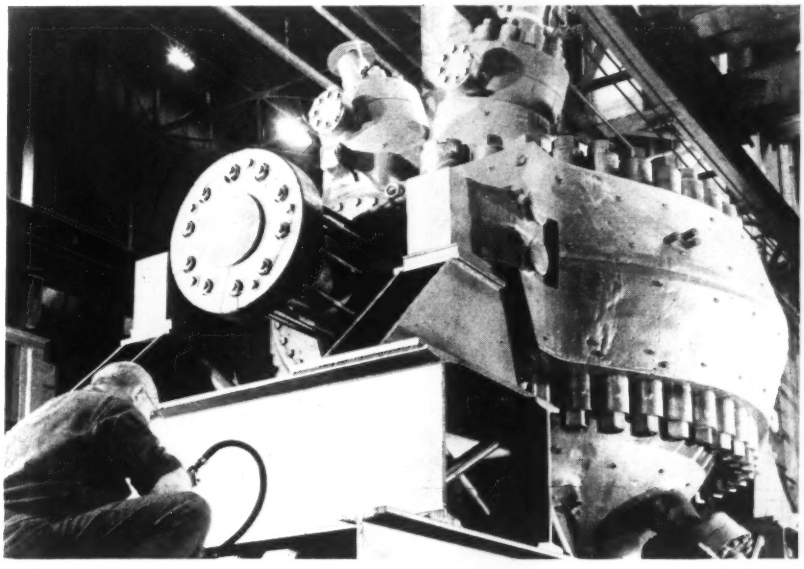
Television is a good example. It now seems as American as apple pie and as ubiquitous as ice cream. But the British demonstrated television publicly as long ago as 1925 and had regular TV broadcasts before World War II.

Britain pioneered, too, in antibiotics, jet aircraft engines, and many phases of atomic energy.

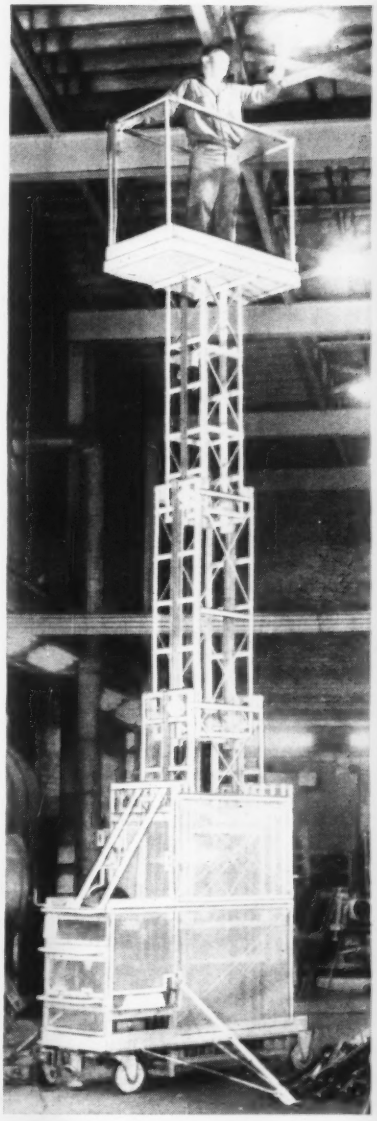
The British have no corner on scientific progress, of course. The jet aircraft engine, for instance, was an outgrowth of gas turbine work in many countries, including our own. We had rudimentary industrial gas turbines in 1936, and the Swiss had a gas turbine locomotive on the road as long ago as 1938.

We can be justly proud of many

High-pressure profits



All over industry, they're putting on the pressure—operating equipment under conditions that would have seemed foolhardy if not fantastic a few years ago. The turbine above, for instance, built by General Electric for a new A.G.&E. power station in Ohio, will receive steam at 4,500 pounds per square inch—nearly twice the initial pressure of any turbine-generator now in commercial use. In chemical processing, pressures up to 50,000 pounds are now quite common, and the National Bureau of Standards reports that several companies are experimenting with new plastics and coal hydrogenation processes that call for pressures in the 100,000- to 200,000-pound range. The reason for the emphasis on pressure is not hard to find: Power plants operate with greater efficiency; chemical reactions are faster and more complete; and, by use of heat as well as pressure, brand new materials can be created (see page 23).



The man who feels safe works better on overhead maintenance

Safety is our first consideration in building Hi-Reach Telescopers.

Model LB (illustrated), push-button control on platform. Four heights 20 ft. to 35 ft. (all models lower to clear doorway 6'-8" by 36"). Priced from $1510.00 up. Model PUL Hand Operated Lift — 15 ft. — $400.00. Custom-built lifters up to 100 ft.

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Economy Engineering Co., 4516 W. Lake St., Chicago 24, Ill., 342 Madison Ave., New York 17, N. Y.

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Which of these production savings do you need most . . . . RIGHT NOW?

Believe it or not, *all of these savings were realized on the same operation*, when an armament manufacturer "threw away the book" to replace milling, traditional in the small arms industry, with *broaching*.

What's more, as this operation is further "shaken out," production is expected to reach 75 pieces per hour on the intricately contoured part, which is broached from a rough, flame-cut billet of Rockwell C-25 to C-30 hardness. Projected production from this one Detroit 25-ton, 90" stroke Dual Ram Broaching Machine will then equal, in one 8-hour work day, what was produced in *fifteen* work days on *twelve* milling machines!

Since most parts are suitable for broaching, or can be adapted to this cost-cutting machining process, you can't afford to stick with methods that may have nothing more to recommend their use than "tradition." And you can't find a better source for broach engineering, machines and tooling than Detroit Broach & Machine Company. Ask us for recommendations . . . soon.

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Dept. H4 • ROCHESTER, MICHIGAN

developments—nylon, the transistor, commercial aluminum, and many more. But it's good, and good for us, to share credit with others, too.

City slicker?

Is the bloom off the suburban boom? Quite a few experts are beginning to think so. They note that the exodus of businesses as well as individuals is slowing down. Manufacturers are finding the city, too, has advantages. For one thing, as the Arnold Bernhard *Value Line* Investment Survey points out, suburban real estate values are soaring and choice locations are becoming scarce.

The city may not be so expensive after all. For instance, the Soabar Company, Philadelphia, manufacturer of price-marking equipment, needed room for expansion. A move to the country seemed indicated.

But the company decided to stay where it was. Though holding its employees was a primary consideration, the decision turned out to be a sound one economically as well. Working with William F. Lotz, Inc., constructors, Soabar engineers found that the needed facilities could be housed in much less space than originally seemed possible.

So, whether you're planning to move, or hoping to sell to those who do—whether you're a manufacturer, distributor, or retailer—maybe this is the time to stop, look, and listen.

All you need is an idea

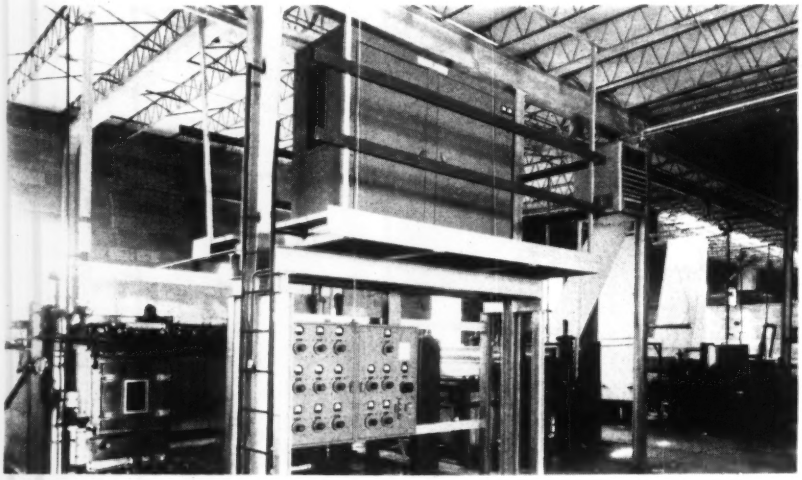
Nothing, it seems, is so old, so familiar, or so fully explored that it can't be given new life with a little ingenuity.

Lead pencils, for instance, have been used as sales promotion gimmicks for years. Yet promotion men are still coming up with new ideas. Franklin C. Wertheim, Jamaica, N.Y., direct mail specialist, for instance, sends out a new one almost every month. A pencil with a hollow plastic section at one end becomes a whole series of gimmicks. Filled with aspirin, it's "an answer to office headaches"; filled with instant coffee, it's just the thing for that longed-for "coffee break"; and a bit of uranium ore makes it an ideal accompaniment for an "atomic" product.

In another set of sales-boosters, the pencil's eraser is replaced by a variety of gadgets to delight the tired business man: a yo-yo; a ring-on-a-string (just try to loop it over the pencil); a plastic whistle (to summon help, we assume); and so on.

No wonder a leading pencil manufacturer proudly notes "pencils are the most frequently pilfered item in

Space



If you don't need it on the ground, put it overhead. And if you can't put it overhead, drop it under foot. . . . You can save valuable production space by following those rules, as these pictures show. At Timberline Fabrics in Denver (above) both heat and power take to the air. Timberline uses ceiling-mounted unit heaters (at right) and has installed the General Electric *Speed Variator* that controls its new processing line on an overhead platform to conserve space and keep the unit out of harm's way.

the United States." And no wonder, despite all the new writing implements, the lead pencil keeps right on writing along.

Quality for sales

From every direction comes new evidence that it's quality, rather than price alone, that snares today's captious customer. This emphasis on product quality showed up clearly in our own survey of materials-users (see September 1956, page 79), and turns up again in reports from the Gray Iron Founders' Society and the National Retail Dry Goods Assn.

The Gray Iron Founders asked some 700 castings buyers, "What do you feel is the most important characteristic in buying castings?" The answer: an overwhelming 66 per cent gave quality first place. Price was second—but with a mere 18 per cent giving it the prime spot.

Philip M. Talbott, senior vice president of Woodward & Lothrop, Inc. and president of the NRDGA, also notes the consumer's strong desire for quality products, but points out that a good many industries still fail to recognize this fact. "I find it . . . incomprehensible," he says, "that many of our industries . . . continue to advertise, promote, and merchandise their products as though we were still living in a depression economy.

"There is nothing wrong with promoting price," he continues. "But why are we so afraid and reluctant to promote quality when today we are serving a quality market?"

That's a question a good many executives might ask themselves.

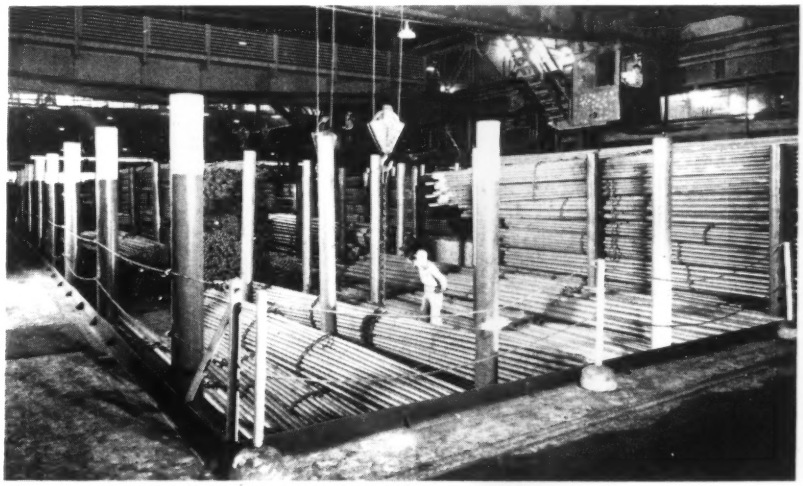
Industry's new "best friend"?

Harder than boron nitride. . . That's what you may be saying one of these days when you want to point out that something is *really* hard.

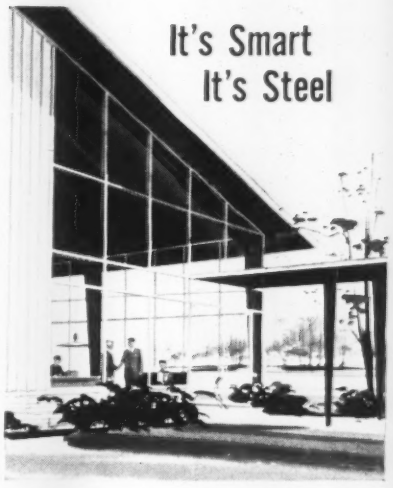
The diamond has a new competitor, and it looks like a good one. Its name: *Borazon*, cubic boron nitride. It's a man-made material, produced at the General Electric Research Laboratories under the same extreme-pressure conditions (over a million pounds a square inch) used in fabricating man-made diamonds (see April 1955, page 72).

G-E scientists say Borazon "scratches diamonds with ease, and remains hard at temperatures where diamonds literally burn up." If it lives up to its promises, it should prove valuable in many applications where the diamond cannot now be used. So far, though, only tiny crystals have been made and commercial application is still in the future.

Savers



A mezzanine or platform like that on the opposite page is one way to save space. Another is pictured here. National Supply Company was stacking steel bars as high as space would permit. A platform couldn't solve its problem. But it still needed more storage room. What to do? National went down instead of up. It sank pits, five feet deep, into the ground and lined them with concrete. Now, it has more than 120,000 cubic feet of added space, a 40 per cent increase over what was previously available.



It's Stran-Steel's New Building Line for Industry

The best looking buildings you ever saw! The finest steel buildings you can buy! That's the new Stran-Steel line of all-steel buildings . . . years ahead in modern design, with quality built in to give years of service.

Stran-Steel buildings are specially designed. You can have a building as big as you want and in any shape that will best fit your needs. Five basic widths—40, 50, 60, 70 and 80 ft., and multiples thereof.

Attractive and distinctively styled, these rugged, low-cost buildings with exclusive *Stran-Satin* exterior provide a non-combustible structure with unlimited design possibilities . . . a luxury look that combines ideally with other construction materials.

Up to $25,000 is available to finance these buildings through the Stran-Steel Purchase Plan. As little as 25% initial investment, up to 5 years to pay.

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Chicago 6, Ill., 205 W. Wacker Dr.
Cleveland 16, Ohio, 20950 Center Ridge Rd.
Detroit 29, Mich., Tecumseh Rd.
Houston 5, Texas, 2444 Times Blvd.
Kansas City, Mo., 6 East 11th St.
Minneapolis 4, Minn., 708 S. 10th St.
New York 17, N. Y., 405 Lexington Ave.
San Francisco 3, Calif., 1707 Central Tower Bldg.
Washington 6, D. C., 1025 Connecticut Ave., N. W.

Stran-Steel Corporation, Detroit 29, Michigan
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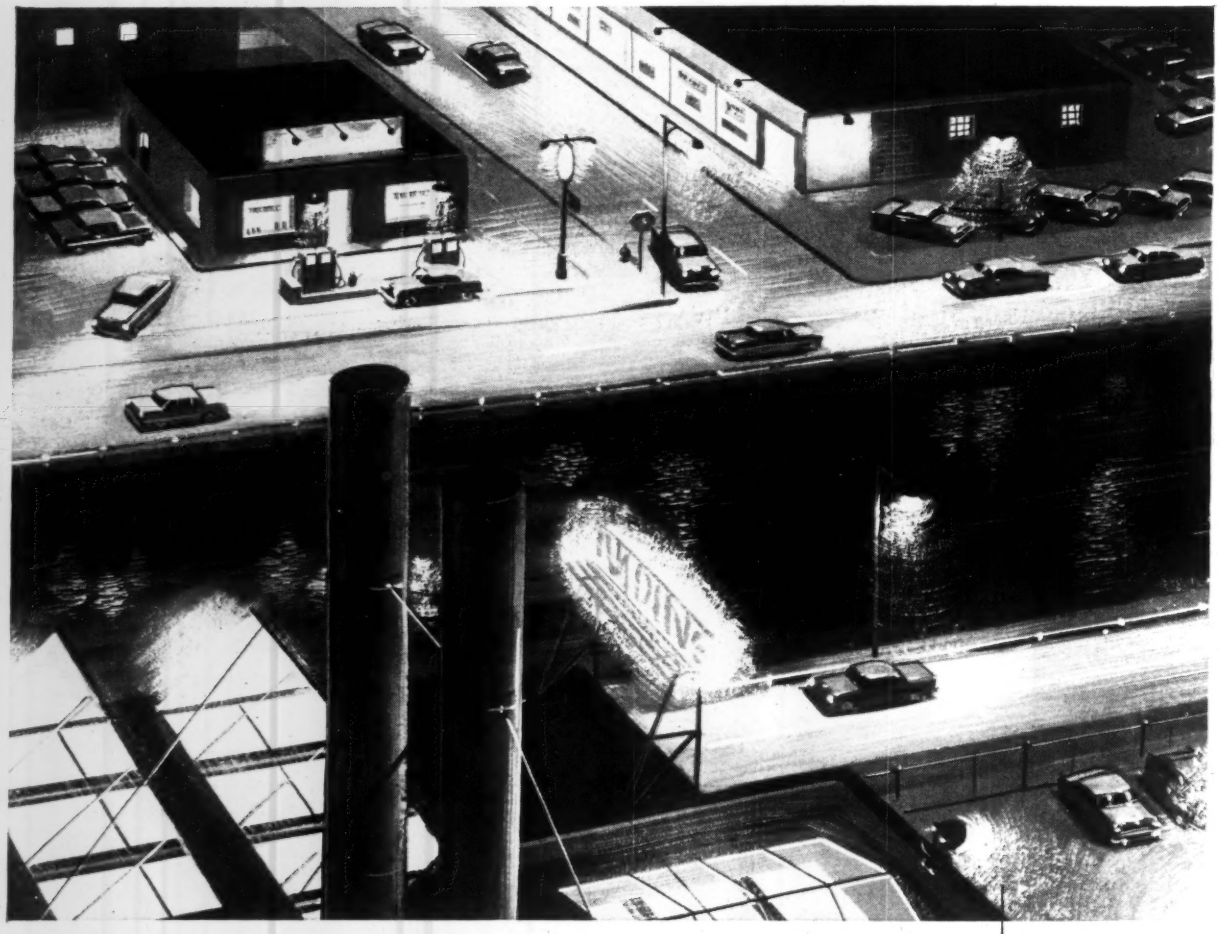
INDOORS AND OUT

LAMPS ARE IN SERVICE THAN



They're Job-Tailored to give you the most mercury light for your money

From Westinghouse developments like those below, you can see how the built-in quality of Westinghouse Mercury Lamps gives *more light when new, more light throughout life, as well as guaranteed long life.*

- Thorium-Coated Electrodes provide HIGHER LIGHT OUTPUT
- Molybdenum Ribbon Seals assure GREATER DEPENDABILITY, LONGER LIFE
- Hi-Temp Life-Time Bases eliminate INSTALLATION AND SERVICE BREAKAGE
- *Weather Duty® construction with special "hard" glass. Outside installations can't be harmed by snow, sleet or rain even when lamps are installed without protective coverings . . . or inside by fumes, or dripping condensation.*

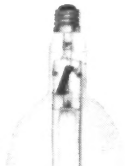
For recommendations for using the most complete line of mercury lighting—for the right kind of lamp for the job—call your nearest Westinghouse lamp supplier or write: *Westinghouse Lamp Division, Dept. D1, Bloomfield, N. J.*

B-H18: 700 W. Fluorescent-Mercury Lamp. Color-corrected Golden-White light for general purposes, flood and street lighting. A Westinghouse exclusive.

YOU CAN BE SURE...IF IT'S Westinghouse

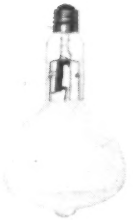
MORE WESTINGHOUSE MERCURY ALL OTHER BRANDS COMBINED

E-H1: 400 W. Mercury Lamp. Most widely used today. For interior and street lighting. **E-H1-Y:** Built-in clear yellow filter warns of road hazards.



A-H12-WD; A-H15-WD:1,000W. Weather Duty Mercury Lamp. Recommended for all interior and exterior applications. Widely used for industrial high bay lighting. Weather proof for heavy duty service.

A-H1-WD: 400 W. Weather Duty Mercury Lamp. Recommended for general purposes, flood and street lighting. Weather proof for heavy duty service.

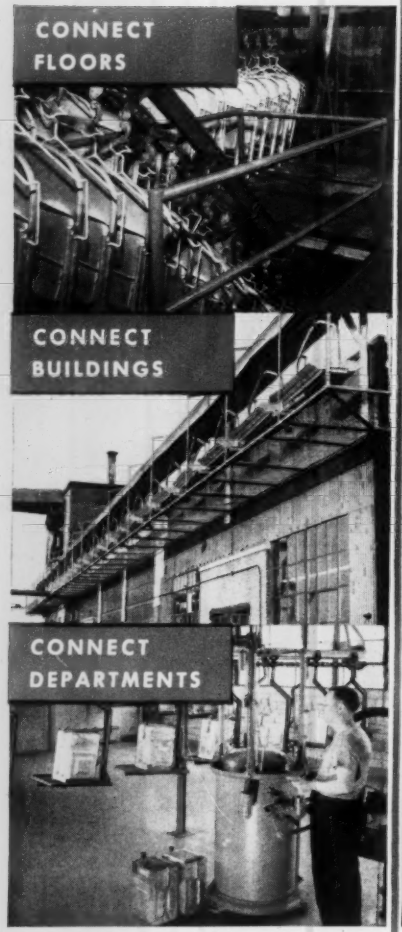


P-H1: 400 W. Semi-Reflector Mercury Lamp. Color-corrected Golden-White for all interior uses. Ideal for areas of high dust concentration.

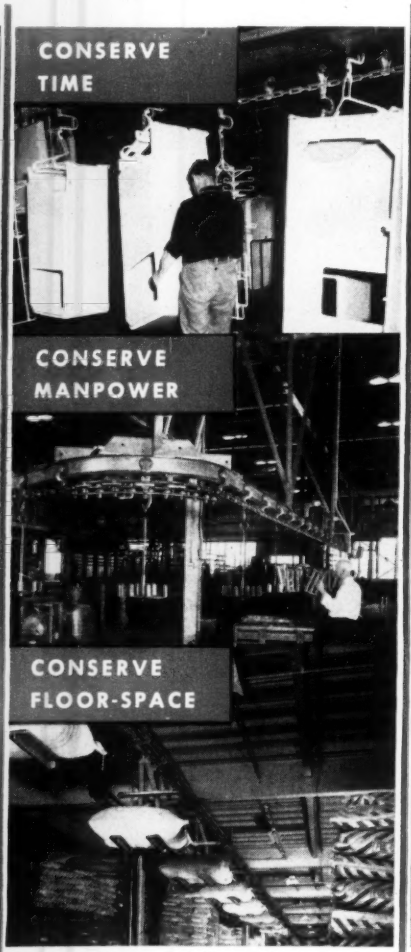
C-H12-WD; B-H15-WD:1,000W. Weather Duty Fluorescent-Mercury Lamp. Color-corrected Golden-White light for general interior and floodlighting. Weather proof for heavy duty service.

J-H1: 400 W. Fluorescent-Mercury Lamp. Golden-White light is color-corrected for interior and street applications. **J-H1-Y:** Rich, yellow light to identify road hazards. Ideal substitute for sodium installations.

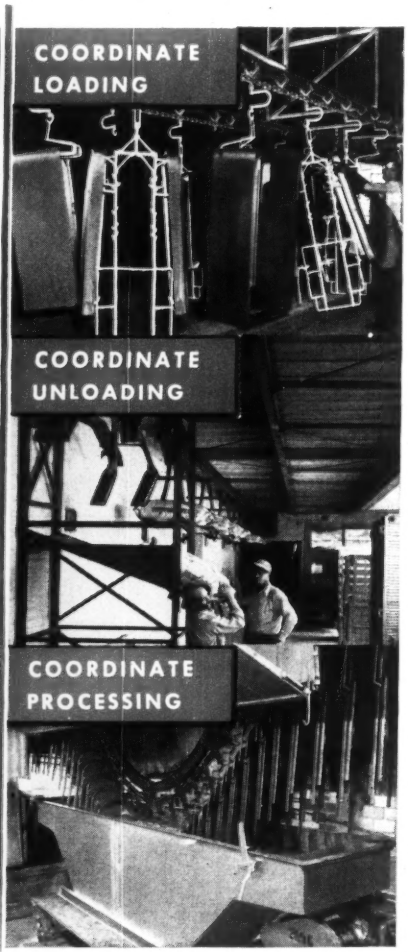
LINK-BELT overhead trolley conveyors connect, conserve, coordinate



Building to building or floor to floor, Link-Belt overhead trolley conveyors can tie all materials handling operations into a smooth-flowing system. Central conveyors can be synchronized with feeder lines from many areas without interrupting flow.



Materials move fast on Link-Belt overhead trolley conveyors. There's no wasted motion—valuable manpower can be released for more productive operations. Adaptable to out-of-the-way installation, overhead trolley conveyors eliminate congestion.



Link-Belt overhead trolley conveyors with a wide selection of attachments are adaptable to an almost limitless variety of materials handling requirements. They simplify and systematize loading, unloading, processing—provide low-cost, efficient material flow.

To learn what they can do for you . . .

Contact your nearby Link-Belt office for an unbiased appraisal of your needs—without obligation. Our specialists will gladly work with your engineers or consultants to help you set up a smooth, efficient materials handling system—inside, outside, floor-to-floor . . . whatever your requirement may be. There's a Link-Belt overhead trolley conveyor lay-out for every job—to synchronize production and storage . . . conserve space and manpower. Book 2330 shows many interesting applications. Write or call for your copy today.

LINK-BELT

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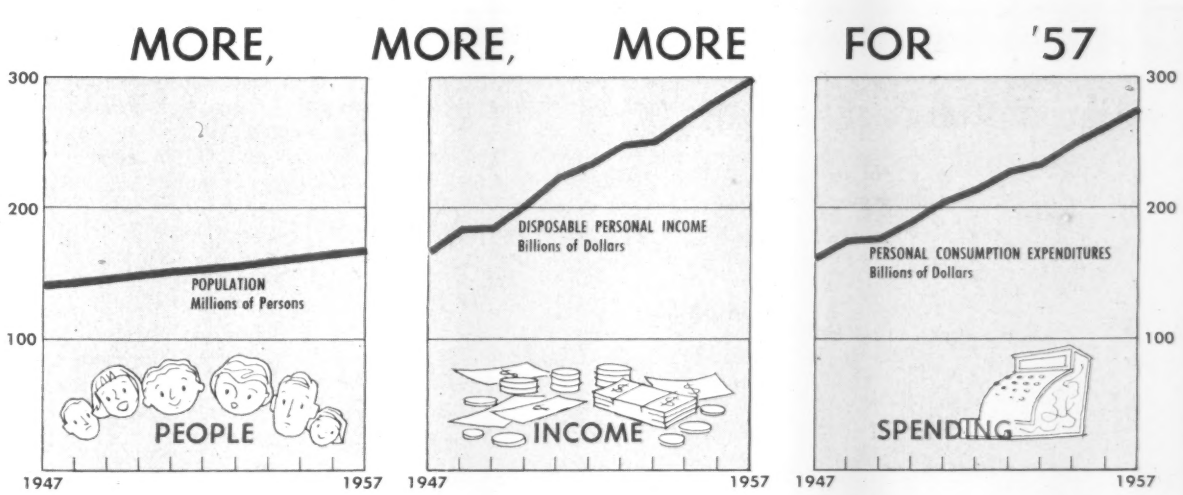
LINK-BELT COMPANY: Executive Offices, Prudential Plaza, Chicago 1. To Serve Industry There Are Link-Belt Plants and Sales Offices in All Principal Cities. Export Office, New York 7; Canada, Scarboro (Toronto 13); Australia, Marrickville (Sydney), N.S.W.; South Africa, Springs. Representatives Throughout the World. 14.497

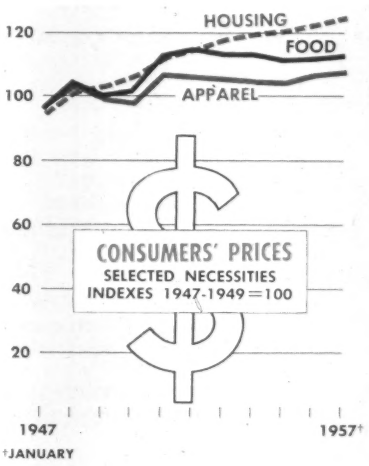


THE TREND OF BUSINESS

INCREASES in jobs, incomes, and spending are expected to help nudge the national output to new heights this year. In an appraisal of President Eisenhower's recent Economic Report, The Joint Congressional Economic Committee forecast that the gross national product will climb to a new high of $435 billion in 1957. This implies a somewhat higher level of business activity for the remainder of the year than in the first quarter. But the quarter-to-quarter rise may be less noticeable than in 1956, when the gross national product rose from an annual rate of $403 billion in the first quarter to $424 billion in the fourth, averaging $412 billion for the year as a whole.

The current inflationary trend is expected to continue. The committee supported the President's recommendation that Congress vote to cancel a reduction in corporate income and excise taxes previously scheduled for April 1. Restraint was urged on both management and labor in price and wage policies, with prudence the watchword for all who wished to increase their buying.

Although there were times in the first few months of 1957 when some business men wondered whether the main problem were inflation or deflation, business volume generally was unusually high. Record personal income was reflected in the advanced level of consumer buying. Retail sales in the first ten weeks of 1957 averaged 5 per cent higher than a year ago. While sales of furniture and appliances were slower than the active volume in the last three months of 1956, the slackening was about usual for the season and volume remained above the comparable year-ago level.



Notwithstanding seasonal declines in the prices for food and apparel in January, they were still more expensive than a year ago.

Retailers of apparel and food both sold more than last year, although part of the increase in dollar volume here, as in other lines of retailing, was due to increased prices.

Higher prices continued to nibble away at consumer buying power in the early months of 1957. The Consumer's Price Index in January rose to a new high for the fifth consecutive month; and officials at the Bureau of Labor Statistics, which compiles the index, could foresee no immediate change in its upward direction. The January rise in the index brought another wage boost of at least one cent an hour to 1.4 million workers whose wages are adjusted under union contracts to changes in the cost of living—mostly in the automobile, farm implement, and aircraft industries. Still, the average factory worker's take-home pay would buy only about 1 per cent more than a year ago, even though the dollar amount of spendable pay was up about 4 per cent.

As a glance at the chart at left will tell, the cost of maintaining a home has increased at a faster pace than the prices of such necessities as food and clothing. The index charted does not reflect directly the increases in the prices of new homes —it measures changes in rents and

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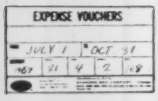


Factory applied labels with gummed title strips a Liberty Box feature.

Liberty Boxes provide for "fast finding" of stored records because of its unique label design. The Liberty label assures you a simple, easy-to-use method for indexing and filing your transferred records.

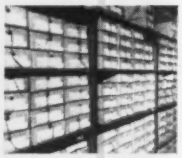
Liberty FEATURES

C. & N.W.R.R. file room is both neat and efficient.

Your records are always protected against dust, dirt and dampness due to the unique cord and tension button closure. If accidently dropped, the contents can't spill out. 25 stock sizes available covering every popular office form—special sizes to order.

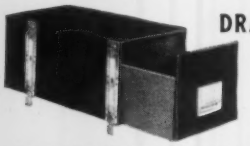
Liberty USED AND SOLD FROM COAST TO COAST

Liberty Boxes are stocked by stationery and office equipment dealers in every state, in every principal city. Write for the name of your dealer and a copy of our latest catalog. No obligation, of course.



Low cost installation at Southwestern Bell Telephone

DRAWER STYLE TRANSFER FILES



STAXONSTEEL Transfer Files build their own steel framework as they are stacked—no shelving required. Easy gliding drawers at any height. Available in Legal, Letter, Check, Freight Bill and Tab Card sizes.

BANKERS BOX COMPANY
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the prices for fuel, furnishings, and household operation expenses. If a comparable index of new home prices were available, it would probably slant upward rather sharply. It is a prevalent view among business analysts that the current slackness in home building reflects a considerable resistance to home prices as much as a shortage of mortgage money.

Home building off

Privately financed housing starts in January were noticeably fewer than a year ago. After allowance for the bad weather conditions that usually curtail building in the Winter months, housing starts were still at an annual rate well below that in the past few years (chart on page 30).

There was some controversy over the Administration's request that Congress authorize, although not require, lower down-payments on homes bought with Federal Housing Authority insured mortgages. Opposing the reduction, an official of the Federal Reserve Board said that people are presently prosperous enough to pay "what really are moderate rates" under the FHA's current program. The Federal Reserve Board's position was that down-payments should be increased in periods of high-level business to encourage saving and reduce inflationary pressures.

The volume of all new construction put in place in the first two

BUSINESS SIGNPOSTS

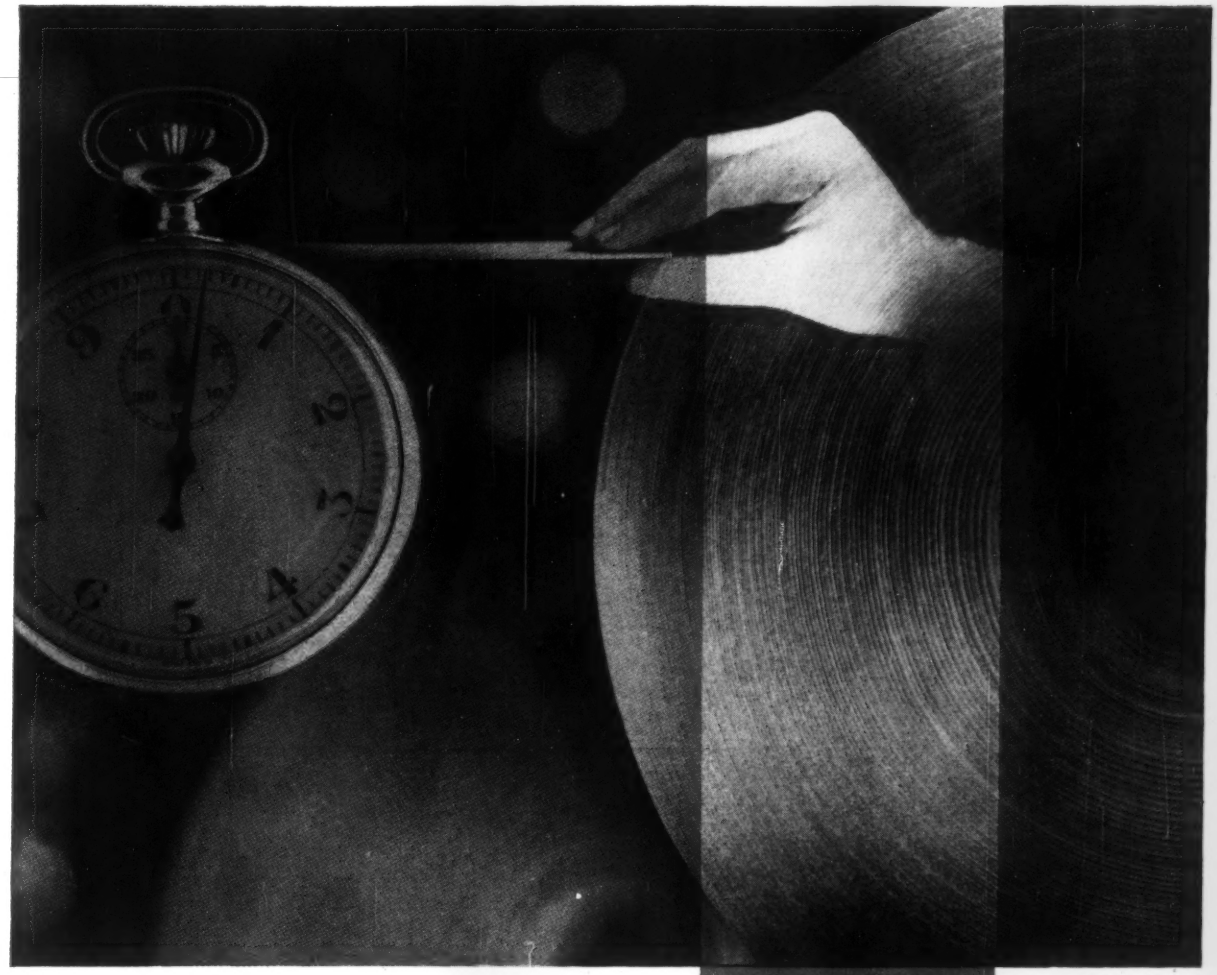
1939 Average	1947 Average	Selected WEEKLY Indicators†	Latest Week	Previous Week	Year Ago
102	163	STEEL INGOT PRODUCTION Ten Thousand Tons (a)	235	239	245
25	49	ELECTRIC POWER OUTPUT Ten Million KW Hours (b)	117	117	111
76	121	BITUMINOUS COAL MINED Hundred Thousand Tons (c)	102	97	92
69	92	AUTOMOBILE PRODUCTION Thousand Cars and Trucks (d)	164	162	155
35	98	DEPARTMENT STORE SALES Index 1947–1949 = 100 (e)	107	98	105
5	13	BANK CLEARINGS Hundred Million Dollars (f)	261	218	240
284	67	BUSINESS FAILURES Number of Failures (f)	318	301	208

1939 Average	1947 Average	Selected MONTHLY Indicators‡	Latest Month	Previous Month	Year Ago
58	100	INDUSTRIAL PRODUCTION Index 1947–1949 = 100 (e)	146.0	146.0	143.0
58	95	NONFARM COMMODITY PRICES Index 1947–1949 = 100 (g)	125.5	125.2	120.6
37	100	FARM COMMODITY PRICES Index 1947–1949 = 100 (g)	88.8	89.3	86.0
59.4	95.5	CONSUMERS' PRICE INDEX Index 1947–1949 = 100 (g)	118.4	118.2	114.6
3.5	10.0	RETAIL SALES Billions of Dollars (h)	14.2	14.9	13.7
5.4	15.6	MANUFACTURERS' SALES Billions of Dollars (h)	28.8	27.8	26.4
45.8	58.0	EMPLOYMENT Millions of Persons (h)	63.2	62.6	62.6
72.9	190.5	PERSONAL INCOME Billions of Dollars, seasonally adjusted annual rate (h)	335.2	334.0	317.1
103	257	BUILDING PERMIT VALUES Millions of Dollars (f)	432.4	416.0	437.6

SOURCES: (a) Amer. Iron & Steel Inst.; (b) Edison Elect. Inst.; (c) Bureau of Mines; (d) *Automotive News*; (e) Federal Reserve Board; (f) DUN & BRADSTREET, INC.; (g) Bureau of Labor Statistics; (h) Department of Commerce.

†WEEKLY INDICATORS: Steel data for the fourth week of March; coal and sales for the second week; all others for third week.

‡MONTHLY INDICATORS: Personal income and manufacturers' sales data for January 1957; all others for February 1957.



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The production engineer called purchasing for the third time in three days. The shipment of plastic parts promised, still hadn't arrived — and then at five minutes of five, a truck rolled up to the loading docks.

Fine — it meant a little overtime to see the parts unloaded and taken thru receiving — a short delay — but all was o.k

It may have been o.k. from purchasing's point of view. Seemingly not much harm done. But as top management viewed the problem, this short delay had cost plenty — in overtime — idle men — idle machines — halted production. **It had cost plenty.**

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We would like to tell you more — about the quality of our molded plastic parts — about skilled die makers and about our up-to-date facilities — and we will — if you call or write, for we invite your inquiry

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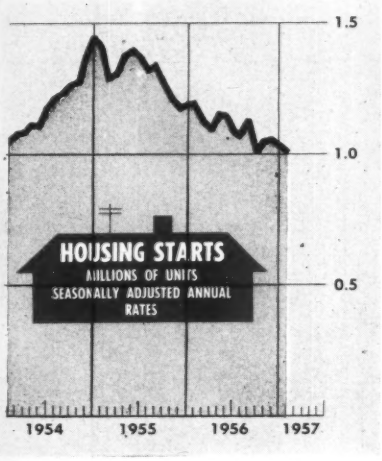

Privately financed housing starts are expected to hover around January's 1,030,000 annual rate for the remainder of this year.

months of 1957 amounted to almost $6 billion, an all-time high for the time of year. Declines in spending for new dwelling units and stores were more than offset by increased outlays for almost every other type of construction. A record amount of money was spent in January and February for new industrial plants, office buildings, and public utilities installations.

That plant construction might be maintained at a fast pace was implied in the contract awards in January. Contracts valued at $228 million were awarded during the month, a 32 per cent increase over January 1956, according to the F. W. Dodge Corporation. This spurt in contract awards reversed a year-to-year downtrend in plant building contracts in the fourth quarter of 1956.

While January's contract awards for new home construction were 1 per cent above a year ago in dollar volume, they were off 9 per cent in unit volume, reflecting the continued concentration on more expensive homes.

Sales up, orders steady

Manufacturers' shipments in January rose more than usual for the time of year and maintained a healthy gain compared with a year ago (chart on page 31). The advance from December in manufacturers' sales was almost entirely in nondurable goods, with higher food and petroleum sales accounting for most of it. In durable goods manufacturing, increased sales of primary metals

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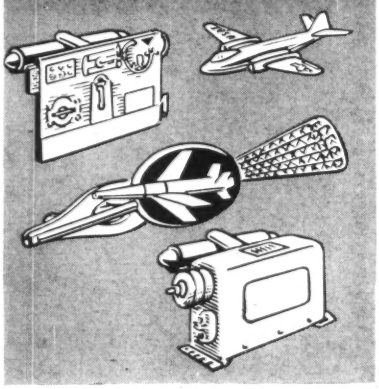

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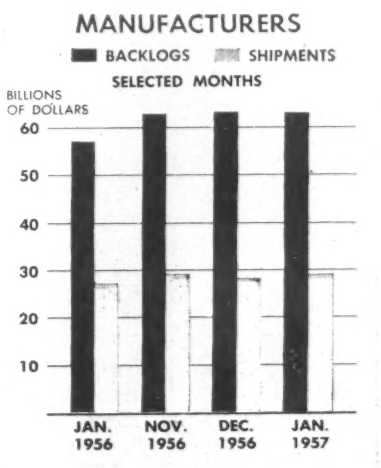
and machinery were offset by a decline in transportation equipment.

A survey by the National Association of Purchasing Agents in February reflected increased buyer resistance to higher prices. It was the consensus that most materials would be plentiful in 1957 and that competition might intensify in some industries where, for some time, it has hardly been noticeable. The purchasing agents surveyed were inclined to believe that wholesale prices would not rise much more in the months ahead. There was no apparent effort either to expand or reduce inventories from present levels.

While manufacturers' new orders in January were somewhat higher than a year ago, there was little change from the preceding month. The volume of unfilled orders, too, was higher than last year, but not appreciably different from that in December. A rise in stocks of nondurable goods held by manufacturers counterbalanced a decrease in durables manufacturers' inventories. Valued at $51.9 billion, manufacturers' inventories were up slightly from December's level, surpassed the comparable year-ago volume by $5.2 billion, a substantial gain.

Equipment buying high

A spurt in new orders for machine tools in January lifted bookings about 10 per cent above the December volume, although they still lagged well behind last year's pace. The drop of 42 per cent from a year ago



A rise in manufacturers' shipments in January slightly reduced the volume of unfilled orders; new orders were high and steady.

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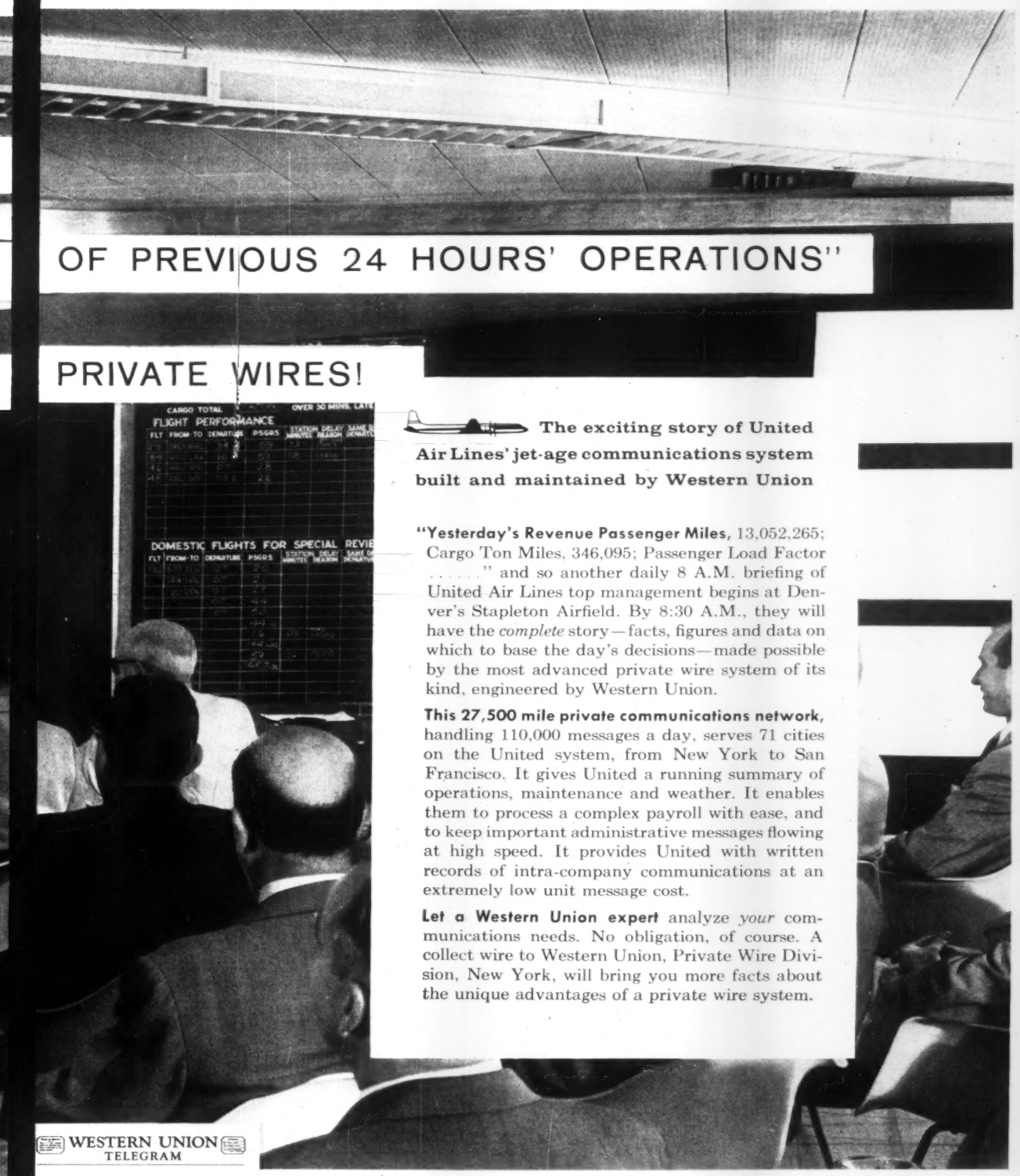

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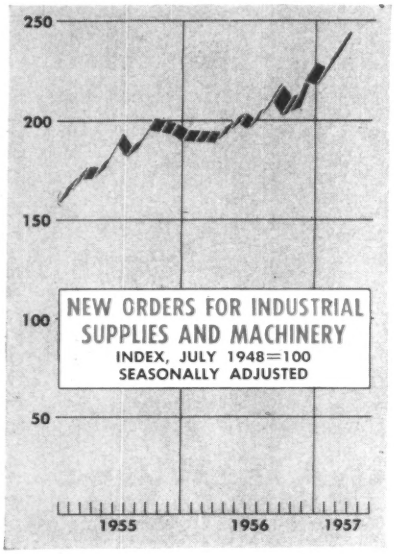
COMMERCIAL CREDIT COMPANY'S subsidiaries, during the past year, advanced over one billion dollars to manufacturers and wholesalers to supplement their cash working capital. The total volume of its finance subsidiaries amounted to over three and one-half billion dollars.



Higher than in any month in the past two years, new orders for supplies and machinery reflected continued industrial expansion.

in new orders for machine tools contrasted with the hearty gain of 40 per cent in shipments. The disparity resulted in another decline in machine tool backlogs to about 6.1 months' production.

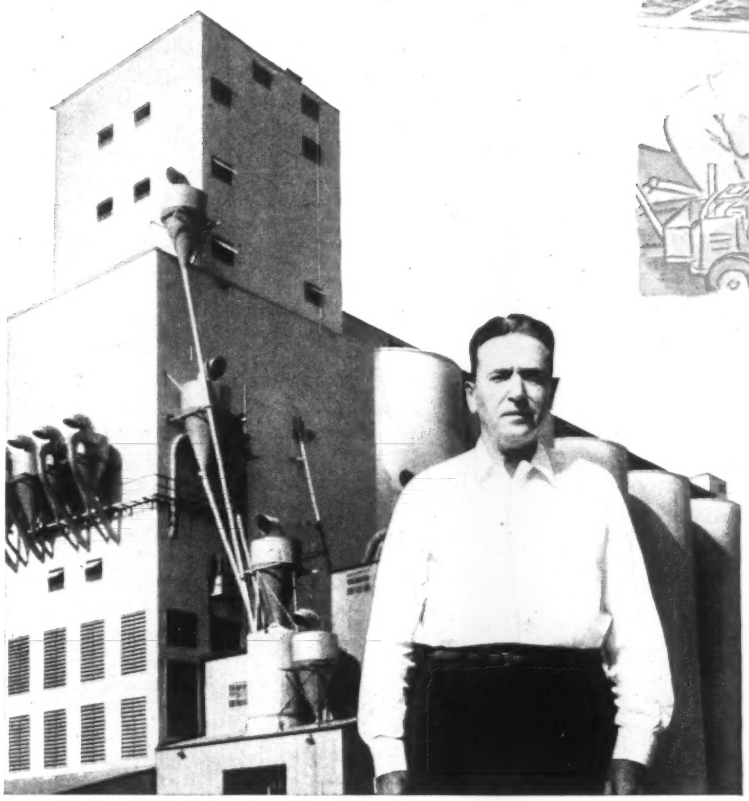
Machine tool builders were not particularly distressed by the year-to-year decline in new business, asserting that the current level of orders is much better than the average for most peacetime years. For 1957 as a whole, it is expected that the industry's new order volume will fall perhaps 10 to 20 per cent below the $924 million for 1956, the second-best peacetime year on record. The all-time peak for a year of peace was 1955's $927 million.

The uptrend in machine tool shipments is expected to continue as builders fill the large backlogs that started to rise in the Fall of 1955.

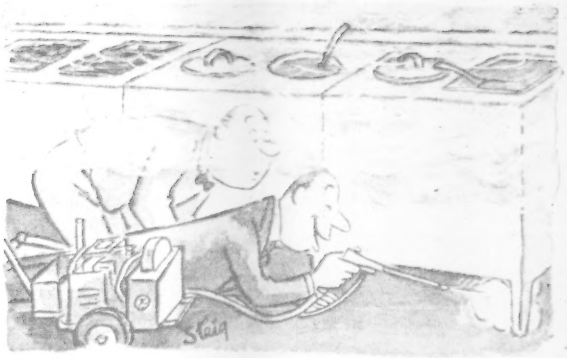
New orders for industrial supplies and machinery held up well in January, according to the index from The American Supply and Machinery Manufacturers' Association (chart above). After allowance for seasonal fluctuations, the index turned upward, well surpassing a year ago.

Production stable

Industrial output in the first two months of 1957 was high and steady, slightly above the level of a year ago. Steel production was at record levels



J. F. "Sam" Dunne, MILL MANAGER
Farmers' Rice Growers Cooperative
West Sacramento, California



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No remote crack or crevice is inaccessible.

WEST's portable SUPER MIST-O-RIZER goes everywhere! It either fogs or sprays VAPOSECTOR, WEST's highly concentrated insecticide. Coverage is amazing.

In fogging, one three gallon filling with VAPOSECTOR controls:
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No waste! WEST's SUPER MIST-O-RIZER atomizes VAPOSECTOR into uniform 8 micron-sized particles. Creates a "dry mist" that doesn't wet or condense on surfaces.

And in contact spraying, 12 feet of air hose attached to the hand sprayer provide easy access to hard-to-reach areas.

"West Insect Control assures us of satisfied customers"

"The combination of West insecticides, sprays and fumigants, plus the technical training West Representatives have given our men, adds up to facilities that are always clean and assures us of satisfied customers who continue to come back to us year after year for their rice requirements," says J. F. "SAM" DUNNE, Mill Manager, Farmers' Rice Growers Cooperative, West Sacramento, California.

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in the first ten weeks of the year, automobile output recovered somewhat from last year's reduced rates, and there were gains in the production of petroleum and electric power.

Contrasting with the heightened activity at factories producing industrial materials and equipment, the manufacture of television sets and household furniture and appliances slackened. The production of nondurable goods was maintained at a high level, with slight reductions in the output of textiles and paperboard offset by increases in other lines.

The Federal Reserve Board's index of durable goods production was at 166 (1947–1949=100) in February, two points above January, while the index for nondurable goods production rose three points to 131.

Credit and savings

Consumers appeared to be a bit more thrift-conscious in the early part of 1957. Installment buying dipped to $31.3 billion at the end of January, with declines in each of the major categories of installment credit, except personal loans. The $254 million drop this January was twice as large as the decline in the comparable period last year and almost five times as large as that in January 1955. Total consumer credit outstanding, which includes both installment and non-installment debt, fell almost $1 billion in January to $40.9 billion.

It was estimated that consumers added almost $14.5 billion in 1956 to their liquid asset holdings—more than in any other year since World War II. While financial observers generally welcomed the savings increase, they were wary of predicting its continuation. Consumers are frequently fickle; an automobile-buying upsurge, or a general spending spree, could easily reverse the trend.

That the will to save has not been undermined by price inflation was determined in a recent survey of consumer attitudes by The Survey Research Center of The University of Michigan. The American people apparently have confidence in the essential soundness of the dollar.

This is a Business Conditions Staff Report, prepared by Lorraine Carson, Business Conditions Editor.

Get rid of truck headaches! (*He's got The Hertz Idea*)

All the advantages of private ownership without the worries! That's what you get when you *lease* dependable trucks from Hertz.

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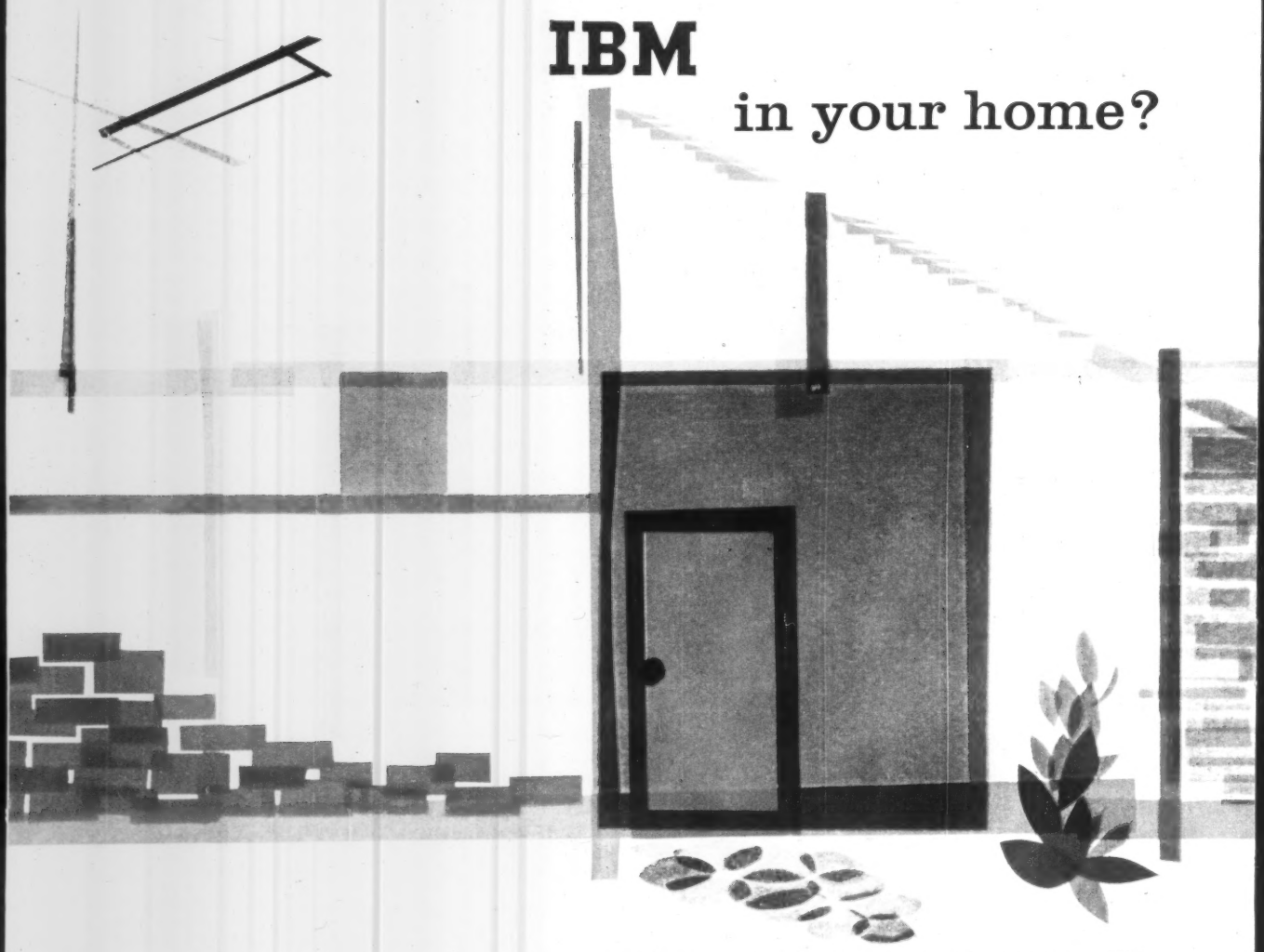

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- WHILE you were still dreaming about a house, the facts that help to keep its cost down were being figured on IBM machines by the lumber, appliance, and transportation companies. The savings effected keep production, inventory, and shipping costs low and geared to meet the nation's building needs.
- THEN, once you start to enjoy living in your own home, these IBM systems coolly figure new savings: your bank uses them to cut the cost of mortgage-loan and time-payment accounting; your insurance company keeps home protection costs at a minimum; and the light, power, fuel, water, and telephone companies all serve you more efficiently and economically with IBM systems.
- YES, every day, in more ways than you can imagine, IBM business systems reduce the cost and quietly add to the pleasure of your daily living.

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Building Contractor: A Pennsylvania building contractor takes the guesswork out of cost estimates by analyzing daily costs with his IBM system. The result: no misunderstandings and considerable cost savings to homeowners.

Mortgage Loans: A large bank now processes 90,000 individual real estate loan accounts in less than six hours—with its IBM electronic data processing system.

Utilities: An Eastern power and light company installed an IBM billing and accounting system, saving $200,000 a year . . . and providing trouble-free customer bills.

IBM DATA PROCESSING

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BUSINESS FAILURES

FOLLOWING January's upsurge, there was a leveling off in business failures in February; at 1,146, failures were about as numerous as in the previous month, when 1,148 casualties occurred. While the toll exceeded by 12 per cent the 1,024 a year ago and reached a postwar high for the month of February, it remained 5 per cent below the prewar level of 1,202 in the similar month of 1939.

Businesses succumbed at a rate of 51 for each 10,000 enterprises listed in the DUN & BRADSTREET *Reference Book*, according to DUN'S FAILURE INDEX. The index extends monthly mortality to an annual basis and is adjusted for seasonal variations. The February failure rate was slightly above the 48 in January and 44 last year, but fell considerably below the rate of 68 failures for each 10,000 concerns in 1939.

Current liabilities of the failures in February bulked the largest for any postwar month. However, it should be noted that the rise from January was attributable to one exceptional casualty (a steel company) with liabilities of $15 million. Had it not been for this case, liabilities would be slightly below the preceding month although continuing above February a year ago. Failures in all size groups under $100,000 were 12 to 15 per cent more numerous than in 1956; in contrast, those of larger size dipped 10 per cent from last year's volume.

In all functions except retailing, more enterprises failed in February than in the first month of the year. While the toll among manufacturers, wholesalers, and construction contractors edged up slightly, casualties among the service companies climbed considerably.

Neither manufacturing nor wholesaling suffered as many failures as in February of last year. But 11 per cent more retailers sickened and died, 28 per cent more construction contractors, and 50 per cent more commercial service enterprises.

The year-to-year declines in failures that prevailed in four regions, including the New England, Middle and South Atlantic States, were offset by marked upturns in five other regions. In fact, some 40 per cent more businesses failed than a year ago in the East North Central and Pacific.

FAILURES BY DIVISION OF INDUSTRY

(Current liabilities in millions of dollars)	Number 2 Months 1957	1956	Liabilities 2 Months 1957	1956
MINING, MANUFACTURING	396	411	49.5	32.1
Mining—Coal, Oil, Misc.	10	4	3.6	1.7
Food and Kindred Products	28	40	3.2	2.4
Textile Products, Apparel	91	102	4.9	6.0
Lumber, Lumber Products	72	62	5.1	3.7
Paper, Printing, Publishing	23	19	1.0	0.5
Chemicals, Allied Products	5	7	0.9	1.9
Leather, Leather Products	14	13	2.4	0.9
Stone, Clay, Glass Products	11	1	0.4	0.1
Iron, Steel and Products	24	22	17.6	2.8
Machinery	43	57	4.7	6.4
Transportation Equipment	13	13	1.0	1.3
Miscellaneous	62	71	4.8	4.4
WHOLESALE TRADE	197	214	11.6	9.4
Food and Farm Products	42	54	4.1	1.8
Apparel	11	14	0.7	0.4
Dry Goods	2	6	*	0.1
Lumber, Bldg. Mats., Hdwre.	18	29	0.7	2.0
Chemicals and Drugs	9	7	0.3	0.1
Motor Vehicles, Equipment	17	9	1.2	0.6
Miscellaneous	98	95	4.5	4.2
RETAIL TRADE	1180	1046	32.6	29.6
Food and Liquor	191	162	3.1	2.2
General Merchandise	62	44	3.0	2.9
Apparel and Accessories	230	206	4.3	5.1
Furniture, Furnishings	173	155	6.2	4.7
Lumber, Bldg. Mats., Hdwre	66	60	2.5	2.2
Automotive Group	126	115	3.9	6.3
Eating, Drinking Places	198	171	6.0	4.1
Drug Stores	29	26	1.4	0.5
Miscellaneous	105	107	2.2	1.7
CONSTRUCTION	357	267	19.1	16.0
General Bldg. Contractors	144	100	12.3	8.3
Building Subcontractors	187	154	5.5	6.9
Other Contractors	26	13	1.2	0.9
COMMERCIAL SERVICE	164	134	6.6	4.9
TOTAL UNITED STATES	2294	2072	119.5	92.1

Liabilities are rounded to the nearest million; they do not necessarily add to totals.

*Less than $100,000.

THE FAILURE RECORD

	Feb. 1957	Jan. 1957	Feb. 1956	% Chg.†
DUN'S FAILURE INDEX*				
Unadjusted	59.3	50.4	50.9	+17
Adjusted, seasonally	51.1	48.0	43.5	+17
NUMBER OF FAILURES	1146	1148	1024	+12
NUMBER BY SIZE AND DEBT				
Under $5,000	178	173	159	+12
$5,000–$25,000	539	543	468	+15
$25,000–$100,000	325	306	282	+15
Over $100,000	104	126	115	—10
NUMBER BY INDUSTRY GROUPS				
Manufacturing	199	197	202	— 1
Wholesale Trade	106	91	108	— 2
Retail Trade	568	612	511	+11
Construction	180	177	141	+28
Commercial Service	93	71	62	+50
	(LIABILITIES in thousands)			
CURRENT	$65,406	$54,060	$49,189	+33
TOTAL	66,200	54,825	49,436	+34

*Apparent annual failures per 100,000 listed enterprises, formerly called DUN'S INSOLVENCY INDEX.

†Per cent change, February 1957 from February 1956.

BUSINESS FAILURES *include those businesses that ceased operations following assignment or bankruptcy; ceased with loss to creditors after such actions as execution, foreclosure, or attachment; voluntarily withdrew leaving unpaid obligations; were involved in court actions such as receivership, reorganization, or arrangement; or voluntarily compromised with creditors out of court.*

CURRENT LIABILITIES, *as used in The Failure Record, have a special meaning; they include all accounts and notes payable and all obligations, whether in secured form or not, known to be held by banks, officers, affiliated companies, supplying companies, or the Government. They do not include long-term, publicly held obligations. Offsetting assets are not taken into account.*

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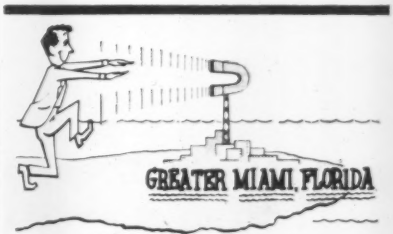

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SPOTLIGHT ON THE OFFICE WORKER

The "forgotten men and women" of the office are receiving prime attention these days as the labor shortage, union drives bring them to the fore

ALFRED G. LARKE, *Employer Relations Editor*

TO PEOPLE who like to record time by major events and major developments, rather than by dates, the years 1957–1958 promise to become known as The Time When Office Workers Came Front and Center.

In between learning how to deal with production workers' unions and concentrating first on training and rehabilitation of supervisors and then on executive development, a number of companies have been giving more and more attention to the problem of white collar workers. For the most part, however, they have been a few of the large companies that could afford personnel research departments and had the opportunity to take a long look ahead. Even among such concerns, the special attention to office and other white collar workers has come mostly since the end of World War II.

As with most movements of this kind, the results of research and the developments initiated by companies with the resources have been brought to the attention of more and more concerns. The growth of interest in the office personnel problem did not reflect any sharp rise in its early stages, but this has recently changed.

Today a number of factors are combining to make even the smaller companies and those not accustomed to long-range personnel planning aware that office workers present problems as pressing as production workers' unionization, supervisory improvement, and the development of future executives. Foremost factors are:

1. The shortage of many categories of office workers, with all this involves in recruitment and training. This, of course, is just another way of saying that there has been an unusually large and growing need for office workers.

2. The depersonalization of relations between white collar workers and management, caused by the big increase in the number of such employees working in single units. The problems presented by this are often accentuated because of the nature of the work involved. Unlike some factory operations, office jobs often cannot be standardized and measured in a way that permits the establishment of accepted output levels. Under such circumstances, it is especially important to maintain a personal relationship that will foster feelings of mutual interest and participation among employees, and will provide an incentive based on attitudes rather than targets.

3. The promise—and fear—of a countertrend toward smaller office forces, originating in development of automation in paperwork processes. A lot has been said and written to show that data processing devices and office automation will not reduce over-all office employment. However, the individuals are less interested in over-all figures and averages than they are in what may happen to them personally. And not too much has been published that would allay this personal fear for their future.

4. What one personnel director calls the "wage squeeze" growing out of the tight labor market and boosting starting salaries of secretaries as well as professional personnel uncomfortably close to what have been in the past and in some cases still are the going rates for experienced employees.

5. Narrowing of the gap (some say it has been eliminated) between the privileges and fringe benefits enjoyed by white collar workers and those accruing to production employ-

ees. As production unions have forced upward the welfare, holiday pay, vacation, supplemental unemployment benefit, and similar perquisites of their members, white collar employees have had less to distinguish their circumstances from those of the men in the mill. In addition, hourly-paid employees have acquired advantages that most of their white collar colleagues do not have, such as well-defined grievance procedures, with skilled aid to present their cases.

6. A growing realization that improved human relations, communications, and "participation" programs, often designed to integrate production workers' attitudes with company aims, have at least as important a role in the office and, in fact, promise even greater company benefits.

The shortage of engineers, chemists, physicists, and other professional and technical personnel, which has filled the newspapers with display-type help-wanted ads, and has raised cries of piracy, is well-known. A measure of the tightness in the office-worker market is given by the manager of the employer relations department in the national headquarters of a nationwide consumer product corporation:

"By and large we haven't relaxed our standards," he says, "but it now takes us about five times as long to get a satisfactory job candidate as it used to. Jobs that we once filled in a day, it now takes us a week to fill. For jobs for which we had to screen applicants for, say, a week, in order to find a good one, now take five weeks or so to fill."

Evidence of the new concern with office workers comes not only in new industry and business programs for white collar workers, but also from union, employer association, and commercial sources.

NAM Is Concerned

The National Association of Manufacturers devoted at least one full session of its five-day, closed-meeting 29th Institute on Industrial Relations in Florida last month to the union drive to organize white collar and professional employees. In a session led by S.L.H. Burk, director of NAM'S Industrial Relations Division, more than 200 policy-making executives examined the economic position of white collar employees. They addressed themselves to the question, "What Salaried Employees Want in Their Jobs," and sought ways and means of providing the satisfactions desired by those who work in offices and laboratories, whatever their income level or responsibility —whether clerical, administrative, technical, or professional.

White collar personnel problems have found a place at the top of the organization's agenda because of the expressed interest of its members. Few companies profess any open concern about unionization. They are building programs that they think will make for more effective and satisfied employees. With greater efficiency and employee satisfaction, they feel they can tackle the problems of recruitment, turnover, absenteeism, and office discipline at their roots, rather than on the more superficial level of symptoms.

On the same day that personnel and industrial relations directors of NAM member companies were meeting in Hollywood, Fla., to exchange ideas and experiences, the Bureau of National Affairs, a Washington publisher of a wide variety of daily, weekly, and bi-weekly labor news and policy services, gave further evidence of the new importance of office personnel: It launched the first issue of its new *White Collar Report*.

The 32 pages of the *Report's* initial issue contained a two-page summary of developments, news of union organizing activities, a tabulation of wages and fringe-benefit clauses in recent office-employee agreements, news of collective bargaining and court and labor board actions, relevant legislative activity, excerpts from U.S. Department of Labor surveys on white collar working conditions, and the text of a recent office-labor survey on white collar working conditions, and the text of a recent office-labor contract.

In New Company

Not the least interesting item was the report of a contract between an Illinois bank and an office workers' union, which embodies the union shop, grievance procedure with arbitration, job posting and bidding procedures, generous holiday and vacation clauses, and 30 days' notice of layoff or its equivalent in severance pay. The bank is not union-controlled as are others that have signed labor agreements in the past. This is the factory labor contract with a vengeance, all slicked up and in a fresh white collar, circulating in company to which it has not been too accustomed in the past.

The unions have been moving in

Automation in the office

Introduction of electronic devices like this Remington Rand Univac System for billing, accounting, and other services that formerly employed large clerical staffs presents management with a new problem. Usual solutions: gradual introduction, to allow reduction of staff by normal attrition; training of old employees to handle new computers.

many ways to improve their organizing efforts among office employees, with whom they have had only moderate success at best in former years.

Item: The AFL-CIO's Industrial Union Department held a two-day Conference on Problems of the White Collar Worker in Washington last December, at which were discussed current status of office unionization, favorable augurs for more organization, disadvantages organizers will face, new techniques of enrolling white collar people.

Item: The United Auto Workers union has established an Aircraft and Avionics Engineering Council, to give special and separate attention to professional and technical workers.

Item: The International Union, Electrical Workers, last month talked up similar problems at a meeting—the fifth annual one—of its Professional, Technical & Salaried Conference Board.

Item: Local 2, Office Employees International Union, is using advertisements in the classified section of a Washington, D.C., Sunday newspaper to launch an organizing campaign, and planned next to use streetcar ads. It is heeding, perhaps, the advice of AFL-CIO leaders that a new kind of approach must be made to white collar employees: "Dispersed as they are throughout the nation with great evenness, they may more closely resemble the general public opinion of the nation than any other group. . . . If you want to reach the white collar workers, you have to be prepared to reach the general public."

Item: Discussion at the AFL-CIO special conference indicated that 30 to 40 general organizers, a sort of technological surplus group resulting from the recent merger, are assigned to work among white collar employees. AFL-CIO Director of Organization John W. Livingston said the organizing staff "has already given considerable help to our affiliated unions in numerous organizing campaigns among white collar workers."

Item: AFL-CIO organizers called in to central points for refresher training in organizing have found a third to a half of their brush-up time devoted to the white-collar field.

There is plenty of reason why management has begun to be concerned about white collar workers, aside from any possibility of unionization. For example, from 1947 to late in 1956, employment of production workers in manufacturing industries increased only 5 per cent while non-production employees – chiefly white collar workers—rose 52 per cent, according to figures drawn from Government sources.

Coffee break – babying the office worker, or promoting efficiency? Most employers think the latter. Relaxation of rigid office discipline, not breakdown, is deliberately fostered to increase accord between employee, company.

Furthermore, there was a tendency to neglect white collar employees—content in their feeling of superiority to factory workers—while the management fire brigades concentrated their attention first on restive production employees, then on supervisors unhorsed by the new industrial relations developments, and finally on executives. In general, the office personnel are the last group in business and industry to require, and get, cultivation by top management—unless the stockholders some day take it into their heads to revolt and organize.

There are notable exceptions, of course. One large chemical concern, with units in many parts of the country, has been working since about the end of World War II, without gadgetry or gimmicks, to build more satisfaction into office jobs. Its aims have been retention of a higher percentage of employees, to lessen the wastes of constant turnover and new recruitment; increasing the effectiveness of its clerical staff by increasing its members' sense of participation in the company's life; developing people for promotion; and to the extent possible making work a pleasure for employees rather than simply a means of earning the wherewithal for purchasing pleasure off the job.

The means the company uses to achieve these aims, according to its vice president in charge of industrial relations, are an adequate salary administration program, maintenance of an environment in which the worker feels he is part of a team and that he is thought of by his supervisors as a person and an individual, constant effort to build jobs and develop people for advancement, use of a variety of communications channels to encourage people to identify themselves more closely with the company, and, above all, supervisory training and development, because it is primarily through better supervision that the other means are put to use.

Prerequisite to any other effort, this man adds, is a good salary administration plan, with job descrip-

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Recruitment of office workers is tougher these days because of tight labor market, but methods do not appear to have changed much. Big difference is that today it may take five times as long to find the good applicant.

Management speaks up! Pitney-Bowes addresses itself in a variety of ways to employees. This is the "Jobholders' Meeting" at which directors report on activities and answer questions. Standing at left is P-B president, Walter H. Wheeler, Jr.

THE SINS OF EMPLOYEE COMMUNICATION

ROBERT NEWCOMB and MARG SAMMONS

Foot-in-mouth techniques of talking to employees result, clearly enough, in garbled communication. They result, too, in decreased productivity and lowered morale. And management may be disturbed to learn that they can be very costly.

THE BIG MAN at the lectern had his listeners on the edges of their chairs. At the half-way mark in his talk he had defined free enterprise and expressed his wholehearted approval of it. He had mentioned the need for understanding between employer and employee. He had endorsed the principles that had made America strong, and he had volunteered a few casual references to the dignity of man. He concluded with the suggestion that everyone in the audience should communicate.

His listeners applauded with enthusiasm, because it was a fiery speech. As soon as it was over, the fire died. A spokesman for free enterprise had simply re-sold those who already believed in it. The listeners streamed into the night, mouthing their praise, and by the next morning had forgotten all they had heard. They dutifully resumed their roles as toilers in the vineyards of the status quo.

This, bluntly, is employee communication in action in a large segment of the nation. It is typified by lip service to a conviction, but it is rarely marked by consistent—and, particularly, by intelligent—action. It is at once a brotherhood of agreement and a fraternity of immobility. In short, in many instances, employee communication never really gets off the ground.

This article is a study of the bobbles of management in the field of employer-employee communication. It is an examination and an indictment of modern methods of conversing with people.

"Love Me Suddenly"

One fairly popular technique, the on-again-off-again system, involves a magnificent abuse of timing. The management with collective bargaining meetings a few weeks (or sometimes a few days) away slips into the mantle of brotherhood and starts a personality barrage on the help. The campaign generally takes the form of letters to employees' homes, referred to among the more callous around the plant as "sweet talk."

The boys in the shop recall that just prior to the last bargaining session management also brought out the "love me suddenly" literature. In its communiques to the home (artfully aimed at the little lady as well as the worker), management made a number of statements, most of them true, and proffered a series of semi-pledges, the majority of which have never been fulfilled. As soon as the contract was signed, the hired hands remember, the letter campaign went into the dead file.

The communication program in such concerns is generally non-existent except in times of crisis. The companies produce employee magazines that skilfully evade the questions on employees' minds, and talk largely of quality, productivity, and

WHAT'S YOUR COMPANY'S C.I.Q.?

Are you getting full value for money spent on employee communications? Here's a quiz to measure your Company's Communications Intelligence Quotient.

	YES	NO
1. Does the communication program have the solid support of top management?	☐	☐

This is important; if you, as the boss, hold a casual attitude, the program will have weak support down the line. When your communications reach the plant level, the voice may be too weak to be heard.

2. Is your communication program based on your own concern's specific needs?	☐	☐

You may have built it around some other company's problems instead of your own. Don't publish an employee magazine, for example, just because your competitor has one; publish it only because *you* need one.

3. Have you investigated *all* employee communication devices?	☐	☐

- ☐ Employee publications
- ☐ Employee newsletter
- ☐ Employee handbooks
- ☐ Employee annual report
- ☐ Bulletin boards
- ☐ Supervisory newsletter
- ☐ Supervisory meetings
- ☐ Supervisory handbooks
- ☐ Group meetings
- ☐ Individual meetings
- ☐ Communications within the community itself

4. Does your communications program provide a regular, dependable flow of information to employees?	☐	☐

In short, is it fast, accurate, trustworthy? Does it anticipate the news requirements of personnel? Does the grapevine consistently reach the employee group first?

5. Do you have a clear, complete idea of what's on employees' minds?	☐	☐
6. Do your employees have a clear understanding of the problems of company management?	☐	☐
7. Are your employees familiar with the economics of the company: cost of operations, maintenance, need for new equipment, replacement of old equipment, need for profits?	☐	☐
8. Are employee benefits thoroughly understood by employees?	☐	☐

Incidentally, do you have any method of determining how much they *do* understand: quizzes, contests, sampling interviews, and so on?

9. Does your communication program have the sincere and continuous support of the management "team"?	☐	☐

Don't forget: Employee communications are designed to aid all departments. So department heads must be behind it in order to derive benefit from it.

10. Have you made an objective evaluation of your communication program in the past two years?	☐	☐

If you have, you know where you stand. If you haven't, how do you know where you're headed?

the need for teamwork. There is normally no orderly information flow, and the shop folks are disposed to feel that the employer has no interest whatever in them except in that disturbing interval just before bargaining.

One of the essentials of good communication is *regularity*. Good communication has no shock-troop quality. It is constant and consistent. Some managements realize this. Many more do not.

The water-faucet principle doesn't work well in employee communication—good employee relations are not nurtured by techniques that can be turned on and off. Some months ago one company revived a program of "love me suddenly" letters, having abandoned the same project after successful conclusion of negotiations the year before. This time the em-

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ABOVE Two-way communication at work! Periodic quizzes are part of supervisory program at Geo. D. Roper Corp., Rockford, Ill. Company knows not only what has been taught but how much has been learned.

BELOW Quiz for employees' wives, based on company's group insurance program, won $10 for this wife of a plant truck operator. To participate in the contest, employees' wives must have read insurance booklet.

COMPANY PLANNING MUST BE PLANNED!

RALPH M. BESSE, *Executive Vice President,*
Cleveland Electric Illuminating Company

Planning for planning sounds like Cole Porter's song "Begin the Beguine," but this article demonstrates the need of a long perspective on a company program before the short-term decisions are made. Mr. Besse examines every aspect of the planned approach and sets an effective pattern for guidance.

BETTER PLANNING is, perhaps, the most talked-of need in business today. This is true for many reasons: rapid growth, new dimensions in size, acceleration of change, intensification of competition, and the other increasingly complex problems faced by industry in the atomic age.

Chief among the basic compulsions toward industrial planning is competition, and the narrowing profit margins of 1956 indicate that it is becoming more severe. Competition cannot be outguessed; it must be outplanned.

The most important reason for planning, however, is not compulsion but opportunity—opportunity to make a profit from new activities or new ways of doing things. A system of planning serves best when it is broad enough to include not merely plans for the solutions of problems, but plans for the discovery and exploitation of opportunities as well.

From the viewpoint of industry as a whole, the survival of the system that permits private enterprise may well depend on company planning. It is not at all clear that our economic system could survive another severe depression, and it is quite clear that major industry must contribute to the planning needed to avoid such a setback.

Thus, if a case needs to be stated for improved planning, it is not hard to conceive.

A few years ago an awareness of these facts prompted The Cleveland Electric Illuminating Company to intensify attention to the whole field of planning.

After a great deal of study, analysis, and discussion among top executives, we launched a program. Our first major step was to assign both short- and long-range planning projects to a number of people throughout the organization, and ask for comprehensive reports on the results. The results were good, but they were not good enough. We discovered very early that people cannot plan adequately unless they are provided with tools, procedures, techniques, and know-how. Planning is as dependent on good organization, specific training, and good administration as any other phase of work.

The climate-makers—planners of planning. Top management committee on planning meets at Cleveland Electric Illuminating, with Elmer Lindseth, president, serving as chairman. The author is seated on Mr. Lindseth's left.

PUSHING PLANNING DOWN THE LINE

. . . Large or small, companies must think ahead to tomorrow's market. Cleveland Electric Illuminating Company has developed a system that focuses the attention of management up and down the line on the planning function. Here are the steps:

1. Create a planning climate: at the top and down the line. (People's interest is most likely to be aroused, Cleveland Illuminating has found, when they are given some actual planning to do on assignment.)

2. Provide the know-how, including the know-how to develop and evaluate alternative courses of action.

3. Assign responsibility for the development of each plan to an individual—not to a committee. Give him authority to get the facts and advice he needs, and hold him accountable for the quality of the plan and the time and money spent on it.

4. Organize for planning. Make the person responsible for each functional area also responsible for plans for improvement. (Everyone who submits a budget at Cleveland Illuminating must also list the planning he proposes to do during the coming year.)

5. See that the doers have sufficient time for planning.

6. Supervise planning as you do any other phase of the work.

Accordingly, we set about to plan the planning. As a basic aid, we organized a committee on planning, consisting of the president, the executive vice president, and all the vice presidents, plus a secretary. The committee meets once a week for an hour and a half, and attempts to encourage widespread establishment of objectives, stimulate the creation of plans to meet these objectives, and promote the principle that planning is primarily a line responsibility. It recommends projects, and points out areas where planning is needed. Members discuss the policies and perimeters within which plans should be formulated, foster organization for planning, and discover and promote the application of the best methods used in modern, successful business enterprise.

The First Conclusion

During two and one-half years of continuous effort, a series of fundamentals has gradually evolved from the studies and planning projects sponsored by this committee. The principal conclusion has been that planning does not just happen. It must be planned.

This is true whether we are talking about short-term planning or long-term planning. In fact, the skills are the same in both cases; only the objectives are different. People who have not first learned how to develop good short-term plans are unlikely to produce good long-term plans.

The fundamentals of planning for adequate planning that we have so far developed are the following:

The first step toward adequate planning is the establishment of a planning climate. Best results are achieved when this begins with top management—the very top—the chairman of the board, the president, the executive vice president, and the important vice presidents. They must buy the proposition that planning, *per se* and as such, is an identifiable, controllable function essential to the health of the enterprise. And they will be completely convinced only if they do a little work on the subject. They must study some of the pertinent literature to familiarize themselves with planning techniques that have been successfully applied in other companies, attend some high-level conferences, take a little time out to think and talk about the subject. And they ought to write down their conclusions for everyone to see and improve. Somebody has said, "If you haven't written it out, you haven't thought it out." That is as true of planning as it is of any other fundamental principle.

> "Anyone who has had managerial experience realizes the heavy and sometimes determining influence exercised on today's operations by the major decisions and actions which he and others took five, ten, or even twenty years ago to produce today's resources and opportunities. The principal concern of business leaders today should be: What decisions and plans need to be made now, what resources should be committed, what effort should be put forth, to be certain that the company will be in a position to meet the conditions of the future and fulfill its opportunities?"
>
> *Ralph J. Cordiner, President, General Electric Company, before the Graduate School of Business, Columbia University.*

The second essential is to make the whole organization planning-conscious. People must be made aware of the importance, the necessity, the techniques, and the payoff of planning. This is not a simple thing to achieve. Top management belief in planning is not enough. Supervisors and specialists at all levels—whoever they may be and whatever their function—must accept the fact that planning is part of their job. And the best way of convincing them is to have them do some actual planning on specific assignment. The subject must be kept alive, also, by the usual techniques of communications and by training programs.

The third essential is a policy decision. Who is going to do the planning? There are two fundamentally different theories on this. One is that there should be a brain-trust, a Pentagon-type group that does nothing but planning, made up of people thought to be smarter and more creative than anyone else. The other theory, which is the one we believe to be sound, is that there must be a combination of planning and doing at all decision levels, that whoever is assigned a "doing" job should also be assigned the task of planning it. Since the doer knows more about the work than anyone else, he should also be the planner.

The next thing needed to establish a planning climate is a clarification of the semantics of planning. This is commonly overlooked, or insufficiently emphasized. The entire organization must have the same understanding of the terms and techniques used in the planning process. Common areas of confusion are these:

1. Long-term planning versus short-term planning. If the distinction is not clearly understood, short-term planning is likely to eat up long-term planning.

2. Institutional versus operational planning. A failure to distinguish between the two may permit operational planning to overwhelm institutional planning because people have

a more direct interest in operations.

3. Process versus product planning. More people are interested in processes than in products. One gains natural attention; the other requires forced attention.

4. Expansion planning versus diversification planning. Most people would rather grow in a straight line than in several directions. The failure to distinguish the two results in many lost opportunities.

5. Specific projects versus continuous projects. A specific assignment normally results in a specific plan. But an activity that is continuous, such as recruiting or training, resists crystallization into specific plans that can be periodically reviewed. The continuous activity is apt to continue indefinitely without a plan.

Finally, it is important that everyone understand that planning and execution are separate functions, even though the same person handles both. A clear line of demarcation must be established. People would rather do things than think about them. As soon as they think of something to do, they tend to obey the impulse to race off and do it instead of continuing to think until a complete and integrated program emerges and they know they are racing in the right direction. This means that planning ought to be as complete as the circumstances permit before action starts, and that the plan ought to be stated as fully as possible. It should be the practice, therefore, to put most plans in writing, particularly those that are novel or of major importance. This is the best assurance that all the important what's, when's, how's, who's, where's, and why's will be covered.

The committee on planning at The Illuminating Company has summarized the concept of planning climate in a statement entitled "The Conditions Necessary to Establish Adequate Planning." The document reads:

"1. That each supervisor and each specialist *believes* in the value of adequate planning.

"2. That each supervisor and each specialist *understands* that adequate planning is a part of his job.

"3. That each supervisor and each specialist *accepts responsibility* for adequate planning as part of his job.

"4. That each supervisor and each specialist *allocates the amount of time necessary* to achieve adequate planning for his job.

"5. That sound and continuous training practices in the technique of adequate planning have been *established* for each supervisor and each specialist and that each one has been *so trained* in these techniques that he is able to do adequate planning.

"6. That there be company-wide *recognition* of the importance and need for cooperation and communication among elements to achieve adequate planning."

Acceptance of Change

All planning is designed for improvement. All improvement requires change. Change within an organization is effective only if the people responsible for making the change, and making the system work after the change, actually believe that it is a good thing. This requires a systematic program to make the organization adaptable to change.

At The Illuminating Company the most effective step we have taken to achieve this result was the adoption of a work simplification program involving widespread training in the basic techniques of job improvement.

continued on page 62

A GOOD EXECUTIVE THINKS AHEAD

A Suggestion for Apportioning your Thinking Time

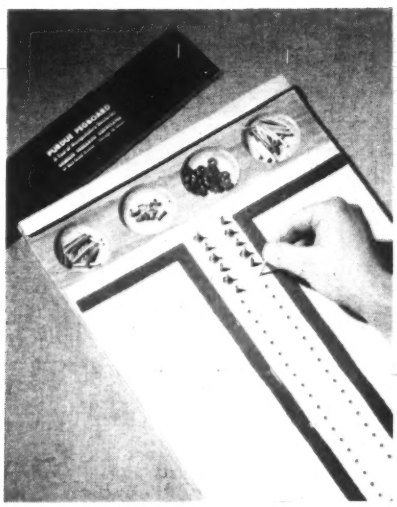
	TODAY	1 WEEK AHEAD	1 MONTH AHEAD	3 TO 6 MONTHS AHEAD	1 YEAR AHEAD	2 YEARS AHEAD	3 TO 4 YEARS AHEAD	5 TO 10 YEARS AHEAD
PRESIDENT	1%	2%	5%	17%	15%	25%	30%	5%
VICE PRESIDENT	2%	4%	10%	29%	20%	20%	13%	2%
WORKS MANAGER	4%	8%	15%	38%	20%	10%	5%	
SUPERINTENDENT	6%	10%	20%	43%	10%	9%	2%	
DEPARTMENT MANAGER	10%	10%	25%	39%	10%	5%	1%	
SECTION SUPERVISOR	15%	20%	25%	37%	3%			
GROUP SUPERVISOR	38%	40%	15%	5%	2%			

Chart used in AMA Workshop Seminar on "Top Management Planning and Control"

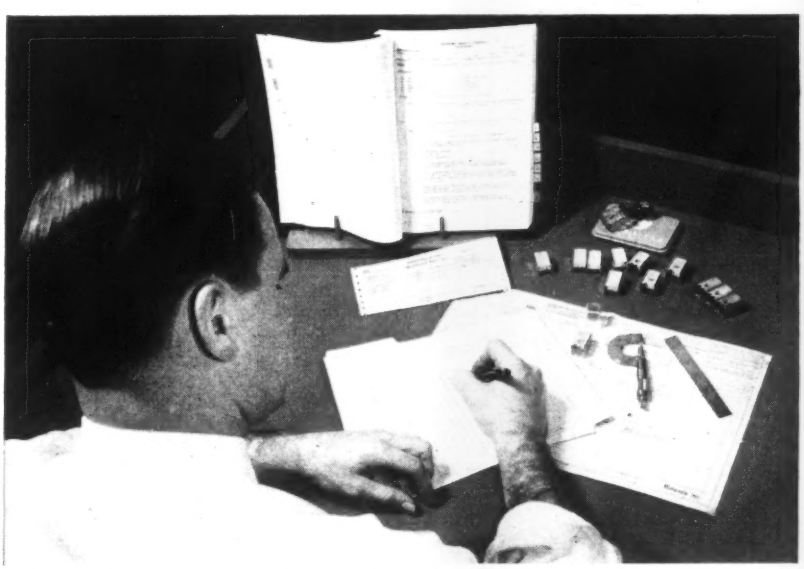
QUALITY CONTROL STARTS AT THE GATE

ANNESTA R. GARDNER, *Industrial Editor*

It takes a lot more than a set of gages and limit charts to meet quality specifications and still show a profit. Here's how one company succeeds.



People—carefully chosen and thoroughly trained—are key to efficient quality control. Pegboard test guides employee selection; detailed drawings help explain specific jobs.



Vendor performance is constantly checked to make sure their quality meets specifications, too. Note well-indexed specification manual and convenient rack provided for holding it.

ANYONE can build a quality product if time and cost are no object. The trick is to hold the quality line without straining the budget or stretching delivery time. That takes a bit of doing.

Good blueprints and clearly written specifications are necessary, of course. Tools and gages have to be in top condition. Handling and storage must be safe and efficient. But these are only part of the story. Finding the right people to do the job, training them carefully, and supervising them properly are at least as important.

As Robert M. Galvin, president of Motorola, Inc., puts it: "We've learned that quality control has to start at the gate—at the entrance to our personnel department—and it never stops. It needs top priority, and top management attention, all the way to the ultimate consumer."

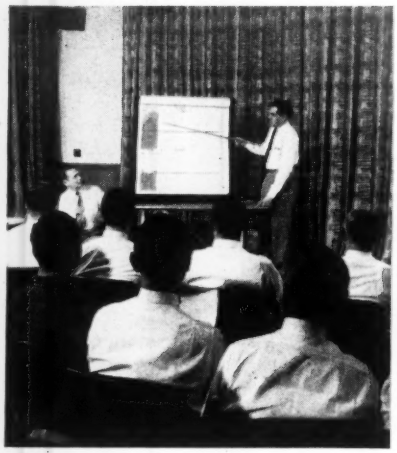
At Motorola, where the pictures on these pages were taken, quality control starts even ahead of the gate—in vendors' plants. As the picture at the left indicates, Motorola engineers keep a close check on the quality of incoming materials and parts; and, where necessary, the purchasing department works with suppliers to help them bring their products up to specifications. Vendors who fail to meet requirements are replaced—but only when attempts to help them improve their performance have proved fruitless.

Naturally, Motorola pays even more attention to its own employees. Every effort is made to enlist their cooperation in quality control and maintain their enthusiasm. Motorola uses a number of techniques—contests, suggestion systems, displays,

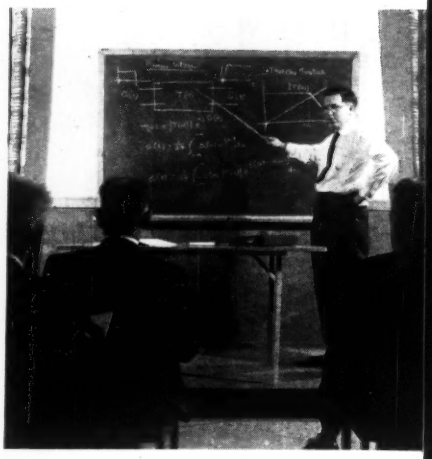
QUALITY CONTROL

Training and testing provide a good start

Selecting the right employees and vendors is the first step in controlling quality. The second is training the employees. Then, a good system for testing materials and components is needed. Motorola uses both inplant and outside facilities; sets up its own courses and tests; and also takes advantage of training and testing facilities offered by city schools and independent laboratories.



Production supervisors learn how to use index charts to check and control quality.

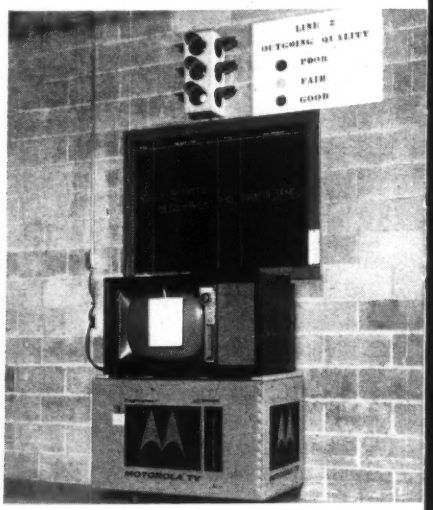


Supplementary studies in outside schools are encouraged by Motorola management.

Conferences, contests, and awards keep it alive

Many a good quality control program dies an untimely death because management fails to give it the proper care and feeding. Even the best system needs adjustment to meet changing plant conditions. And, like any product, the program must be sold, and re-sold, to its "customers." The pictures here show methods Motorola uses to maintain and "sell" its quality control program. For other ideas, see *Boosting Quality with Plant Campaigns*, MODERN INDUSTRY, February 1950, page 47.

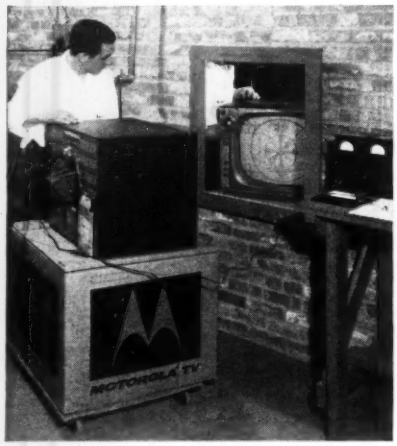
Production and engineering supervisors meet regularly to discuss quality problems.



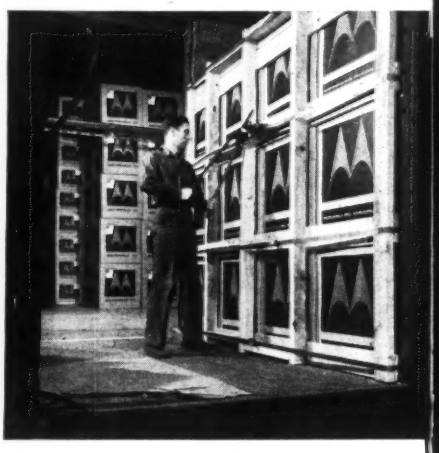
Quality indicators, like stop-and-go light shown here, spark interest in the program.

Spot checks and field reports follow through

The quality control job is by no means ended when the product leaves the assembly line. It takes plenty of care to make sure that quality built into the product does not leak out through damage in storage and transit, and that continuing progress in quality is made. At Motorola, for this reason, reports from the fields are carefully collected and channeled back to designers and production engineers.

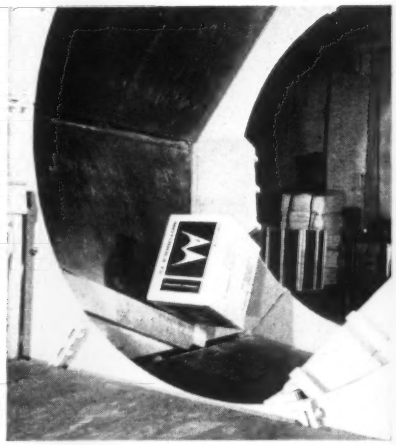


Finished products are selected at random from the warehouse for a last-minute check.

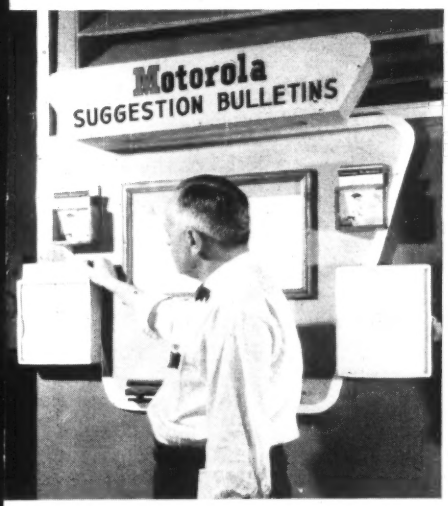


Damage in transit is minimized by careful car loading, and this new lock-in system.

Grueling tests make sure that new parts can and will conform to specifications.



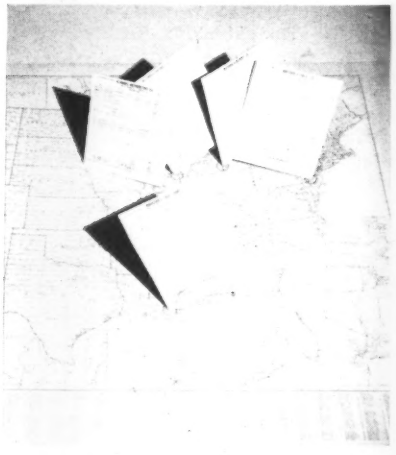
Independent laboratory helps Motorola put new shipping containers through their paces.



Suggestion system taps ideas of the man-on-the-job for improving product quality.

Individual and group awards give workers concrete proof of management's appreciation.

Returned parts are analyzed by engineers to find out what went wrong—and why.



Reports from distributors are also culled for ideas to help in quality improvement.

and awards (see photographs)—and is careful to change them frequently enough to keep interest high.

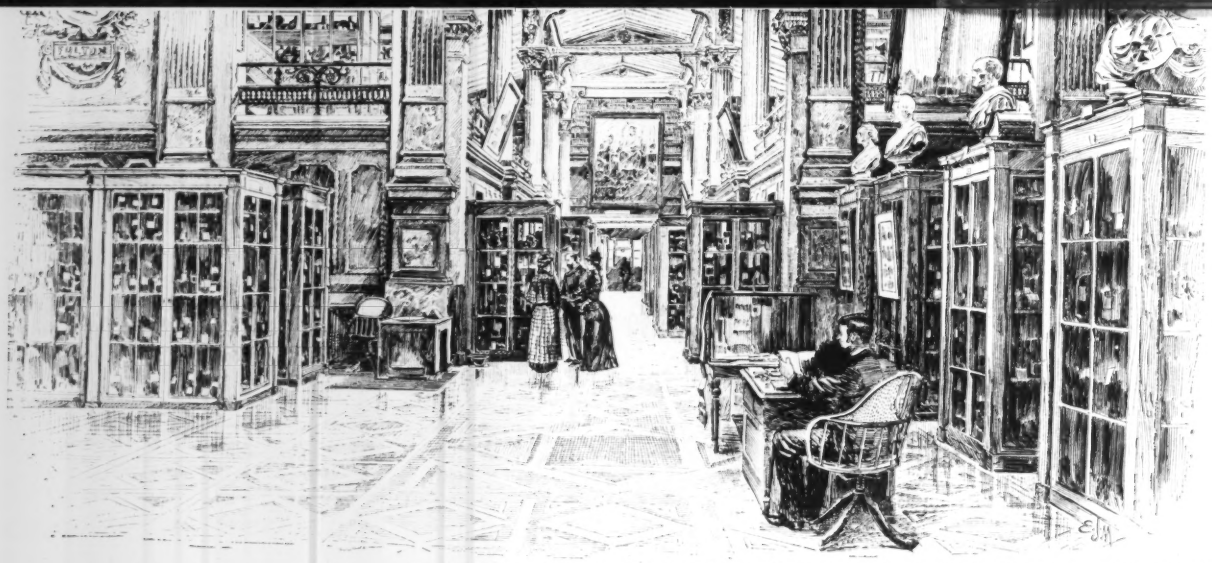
Reports coming back from the field are also used to focus attention on quality. Production-line workers do not, of course, need detailed reports on every complaint. But it is a good idea to let them know what happens to a product when it leaves the plant. That means telling them about noteworthy compliments as well as about complaints and giving each worker a chance to see how his own particular job affects the over-all performance of the finished product.

Quality workmanship can be recognized and rewarded in a number of ways. Motorola keeps individual as well as departmental records of production quality and takes these records into account when promotions are being considered. In other companies, where regular wage incentive systems are in effect, quality standards are usually built into the job specification. In addition, there are often bonuses for reducing the number of rejects and holding down rework costs.

Supervisors, too, may share in this type of incentive—if only through the device of charging their operations for the cost of repairing and replacing poor-quality items. This system can be given a positive instead of a negative slant by rewarding, or at least recognizing, supervisors who show significant progress in reducing rework costs.

Interest in the workers and their performance should not, of course, mask or detract from other phases of the quality control program. Controlling product quality is a three-pronged problem, and all three prongs deserve top management attention. In addition to careful selection and training of workers, management will want to make sure that it has provided efficient equipment and good working conditions for both people and machines. It will also check again to see that quality standards are realistic—economical as well as attainable. Products should be as good as they need to be—but no better. As many a company has found to its sorrow, standards that are too high can be just as costly as quality that is too low.

Quality control is not a simple job or a one-shot operation. But those who take the time and trouble to do it well will find it more than pays off.



THE PATENT OFFICE HAS CHANGED SINCE 1891, BUT HAS THE LAW?—DRAWING FROM THE BETTMANN ARCHIVE

PATENTS AND PROGRESS:

Is Our Patent Law Obsolete?

JOEL B. DIRLAM, *The University of Connecticut*

As research becomes increasingly concentrated in the hands of the industrial giants and the Federal Government, complaints are heard that the Patent Law, as presently enforced, will stifle invention. Are changes in our patent procedures needed to safeguard our economic growth?

GRAVE DOUBTS have been voiced in some quarters about the ability of our patent system to cope with the problems presented by invention in an age of fast-breeding jet-propelled research. A leading patent attorney has raised his voice against what he believes to be a dangerous rise in judicial hostility to inventors. From another standpoint, a sociologist urges that the patent system is atrophied to the core, and can do little to stimulate, if indeed it does not actually obstruct, material progress. These views by no means exhaust the roster of criticisms of the patent law and its interpretation, but they are representative of the range.

This concern has already given birth to two extensive surveys, now in progress, that should add much to our knowledge of patents. The first, financed by the Patent Foundation of George Washington University, has sponsored, among other projects, inquiries to determine what proportion of patents are actually used. It is also exploring the relation between patents and the creation of new firms. Somewhat later, Senator O'Mahoney's Patents Subcommittee of the Senate Judiciary Committee commissioned a series of studies by authorities, including Dr. Vannevar Bush and Dr. Walton Hamilton.

It is impossible, of course, to anticipate in detail the conclusions these investigations will reach. Certain leading trends in patent economics and law are nevertheless apparent. Since high-level employment and, even more important, our national security depend upon our ability to sustain a continuously accelerated rate of economic growth, we cannot afford to ignore anything as intimately related to the productive process as the patent system. If it is in any way appreciably retarding or distorting the pattern of expansion, its defects should be remedied posthaste. What is the situation as it exists at present?

Corporation Patents Predominate

In substance, the procedures and standards embodied in the 1952 patent statute differ little from those of the Act of 1836, when the individual inventor played a paramount role. Today, invention is largely a matter of teamwork, not the product of isolated geniuses or secretive crochety Yankee mechanics.

Edison had an "invention factory" operating at full blast at West Orange in 1890, but only within the past two decades has the decline of

the individual inventor and the triumph of the corporate laboratory registered fully in patent statistics. As late as 1920, 72 per cent of the patents issued went to individuals. By 1938, corporations received (by assignment) over half. Today about 60 per cent of the patents, and probably a higher percentage of the commercially valuable patents, go to corporations.

It is, furthermore, the big corporations that dominate patenting activity. According to the National Science Foundation, in a report recently made public, companies with 1,000 or more employees owned most of the patents and submitted most of the applications. By practicing the business of invention the corporations have made it difficult to single out the actual inventor for patent purposes.

According to Dr. Vannevar Bush, "The transistor emerged from a long period of intensive group research, principally at the Bell Laboratories. The act of invention was only one part of a well-ordered research in which many very able scientists and engineers participated."

Thurman Arnold has commented on this in colorful language: "Each man is given a section of the hay to search. The man who finds the needle shows no more 'genius' than the others who are searching different portions of the haystack."

Solo inventors, of course, remain and are productive, but the climate is inhospitable. One of the last and greatest was Major Edwin Armstrong, undisputed inventor and perfector of FM. Dr. Edwin Land, inventor of the polaroid camera, is another of these notable exceptions, but even he, like Edison, is backed up by an elaborate research organization. The obstacles to individual experimentation in such fields as electronics, chemistry, and petroleum refining without the equipment of a large

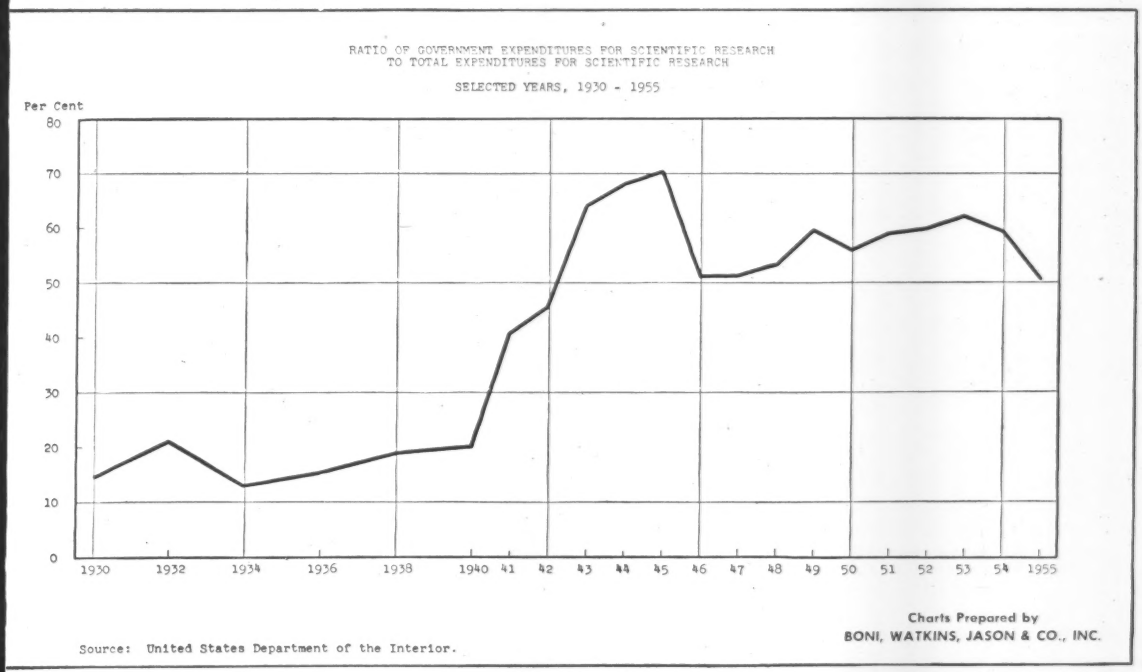
The Bettmann Archive

A century ago, inventors tinkered in workshops and made discoveries almost by chance. Today, industry and Government support research designed for what seems to amount to mass-produced invention.

research laboratory are so obvious they need not be detailed.

In 1787, when the patent clause of the Constitution was drafted, it was assumed that the financial rewards of the temporary monopoly invention would be reaped by and provide a stimulus for its inventor-patentee. Modern team research by hired employees who agree to assign patents to their employer has, in large part, destroyed this direct incentive. Even if it was the lure of a potential monopoly that stirred Eli Whitney to his fateful ten days' labor, his subsequent experience, like that of many others, showed that rewards, patents, and technical contributions are by no means closely linked.

As a matter of fact, a financial history of invention would bear an uncomfortably close resemblance to the history of gold mining. Most inventors have probably spent more on their inventions than they ever got out of them. The inventors who struggled with a recalcitrant new art in the early stages have often led miserable lives, and even been penalized when latecomers benefited from their mistakes. John Fitch's financial misadventures with the steamboat before Fulton are well known. Dr. Lee De Forest, who made amazing strides in electronics almost single-handed, is generally credited with the vacuum tube development prior to



World War I that made modern radio possible. Yet his inventive career was not singularly profitable.

If the seventeen-year monopoly granted under the statute has not been a reliable protection for the individual inventor, it seems even less suited for the continuous investment and output of the corporate patent factories. In some cases, the term would seem to be excessive, in others woefully insufficient, if its broad purpose is to permit development expenses to be repaid and provide incentive for exercise or hire of the inventive faculty.

The Value of Monopoly

Although the outsider has meager data on which to draw, the monopoly period does seem to have reasonably fulfilled its function in the case of nylon, which cost Du Pont $45 million to develop. Sun Oil's development of catalytic cracking appears to be another example of efficient functioning of the monopoly grant. There may even have been overcompensation for the moistureproof cellophane patents. On the other hand, some of the participants in the early experiments that led to television, such as Farnsworth, would have had great difficulty in realizing their costs if they had not been so fortunate as to have interference proceedings prolong the life of their patents into the commercially successful television era. Fessenden and De Forest were unlucky enough to obtain patents in the radio field too early in the industry's development. If the monopoly privilege were to function with 100 per cent effectiveness, it would have to be geared to the varying industry characteristics, as well as to the stage of development in which the patent was issued.

It is not at all clear that the monopoly reward has been instrumental in originating or developing many of our greatest industries. Two of the most important, railroads (including Diesel locomotives) and automobiles, contributed outstanding expansionary impetus to the U.S. economy with little or no aid from patents. Hunt, the first inventor of the sewing machine, did not patent, and there is much reason to believe that Drawbaugh treated the telephone in the same cavalier fashion. It is unnecessary to do more than mention the most important recent invention—atomic power—which owes nothing to the usual incentives. More than half of organized research and development in the atomic power field is today on Government order.

What Is an Invention?

The development of organized research teams, making a business of producing patentable inventions, has tended to produce a seamless web of progress. What, exactly, is the invention? This presents great difficulties to the Patent Office or the courts when they have to decide whether the product or process described in a patent satisfies the standards for inventive novelty.

There is no doubt that the Wright Brothers' flying machine embodied a significant advance over "prior art" of the gliders and Langley's spectacularly unsuccessful aerodrome. Advances in other fields have often proved less easy to describe. Some fourteen years of legal battles between GE and AT&T over the priority of the Langmuir and Arnold vacuum tube patents, respectively, concluded with a Supreme Court finding that there had been no invention. Marconi failed to satisfy statutory requirements for novelty in his contribution to the wireless.

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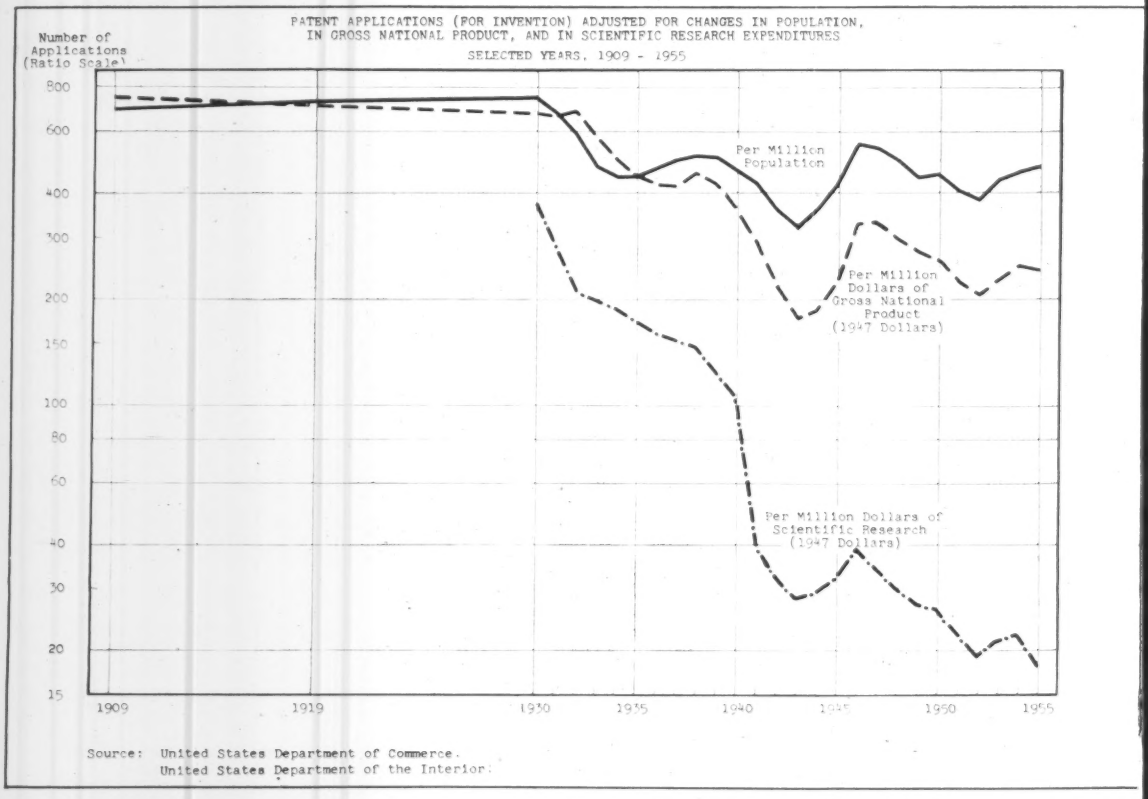
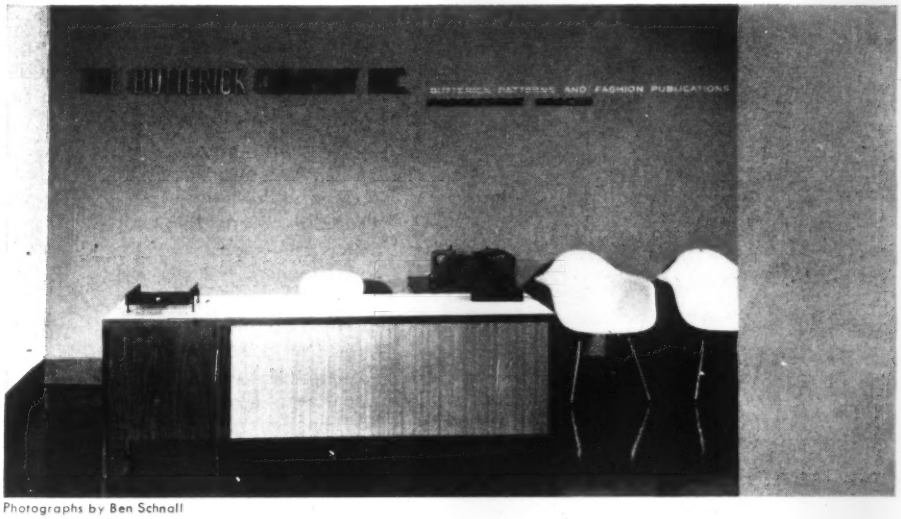


MAKING NEW OFFICES FROM OLD



Photographs by Ben Schnall

Modern entrance design belies old location of Butterick Company headquarters, provides fresh, inviting reception for company's visitors. Many special problems—in lighting, air conditioning, and arrangement—had to be solved to make this office the impressive, efficient place it now is. But company executives find the result well worth its cost.

It's nice to move into a brand-new building. But you don't have to move to give the office a brand-new outlook. Here's how to overcome limitations of time and space.

A CRAMPED, cluttered office is not only a poor place to work; it's a bad place to receive customers. Yet many companies housed in old buildings make little attempt to remedy the situation, feeling that not much can be done without moving to a brand-new structure or at least acquiring additional space.

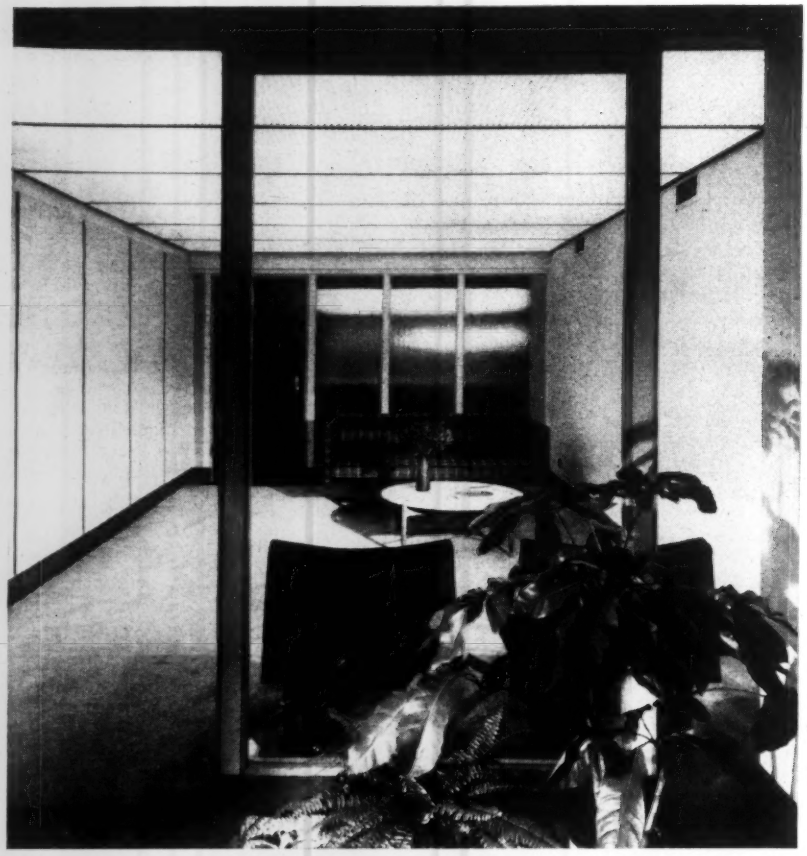
The fact is a great deal can be done—even when the space is irregular in outline. As the pictures show, good planning can make it possible to fit offices to each executive's needs, provide pleasant work areas for the clerical staff, and even allow for such "extras" as conference rooms and special reception areas. The offices are the headquarters of The Butterick Company, located in an old multi-story building in lower Manhattan. The company has been there for many years.

This space was redesigned by a New York consulting firm—Designs for Business, Inc. But many companies can do a lot for themselves if

OLD LAYOUT was cramped, cluttered, and dingy. Though ceilings were over-high, diagonal walls hemmed the area in, made efficient arrangement seem almost impossible.

NEW LAYOUT turns negatives into positives, puts irregular shape to work with diagonal arrangements like that at right. L-shaped modular desk (foreground) also saves space.

Making visitors welcome



Main waiting room of Butterick office is totally enclosed, but luminous ceiling, glass partitions, simple furnishings, and green plants give it a bright, gracious, and inviting air.

Special reception area is set aside for executives' guests. Despite shortage of space, Butterick felt this was important so the designer provided the arrangements shown here.

they go about the job the right way.

First step in planning an office, old or new, is outlining the problem—preparing accurate, detailed drawings of existing space, including locations of air ducts, electrical outlets, and other services; and analyzing work flow and employee needs.

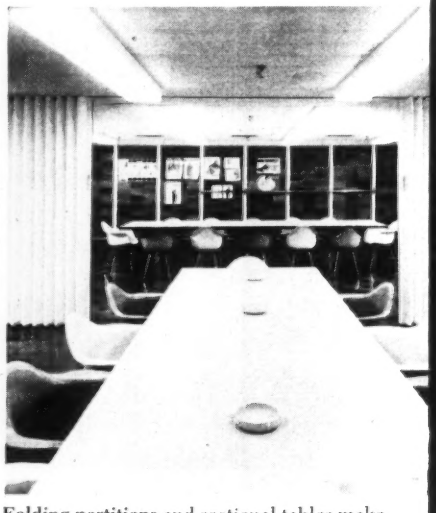
The more information the flow sheet contains, the better. Modernizing an office provides a rare opportunity to sweep the cobwebs out of office procedures as yellowed papers are cleaned out of long-neglected corners.

It's not enough, for instance, to note that a certain clerk "uses files." How often does she use the files? Is it essential that they be located close to her desk? Could she be served from a central filing area?

Nor is it safe to assume that all office work requires the same amount of ventilation and lighting. As Maurice Mogulescu, president of Designs for Business, points out, today's electronic data processing machines can generate a lot of heat and may require extra air conditioning while file areas may require less than the normal amount.

In planning executive offices, the "obvious" arrangement – a straight progression down the line of authority—may be anything but convenient. Far more important in office location than an individual's place on the executive ladder are such questions as the number of visitors he receives

Custom-tailored



Folding partitions and sectional tables make it easy to handle groups of various sizes.

and the frequency of contact with other members of the staff.

Rank does have its privileges, of course. Designs for Business generally allows 250–400 square feet for top-echelon offices, 150–250 for middle management, and 100–150 for junior executives.

Top executives generally write their own ticket in regard to furnishings; others usually fit in with an over-all plan. Mogulescu believes, though, that every effort should be made to allow even junior executives some freedom of choice.

In clerical areas, there isn't much room for personal preference. But there should be room for employee comfort and convenience.

Work areas can be "dressed up" with light-colored walls and occasional color accents—though care must be taken to avoid a garish or glaring look.

Then, Designs for Business recommends that at least 65 square feet be allowed for each employee in open areas, and 50–100 square feet in semi-private offices. Minimum aisle width is about 30 inches.

As these points indicate, an efficient office doesn't "just grow." Today's office, with its electronic data processing machines, paperwork conveyors, and automatic collators, is a production area in almost every sense of the word. Alert managers now recognize that it deserves as much attention as any part of the plant.

—A. R. G.

conference room

Glass sidewall gives feeling of spaciousness. Drapes can be drawn if privacy is desired.

Fitting offices to executives' needs

Specially-designed cabinets in this Butterick executive's office give him needed extra work and storage space, show how once-wasted recess in wall can be turned to good use.

Specific requirements of each executive were considered in furnishing offices. This one was designed for company advertising manager. Note unusual desk, side table, shelves.

All the world's a cage, where many preen
and a few have lost their plumage

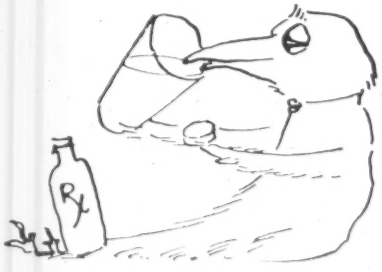
THE OFFICE AVIARY

A Guide to Some Common Species of Desk Birds

IT IS NOT necessary to go far afield with an Audubon guide, a telephoto lens, high-priced binoculars, or a shaker of tail-catching salt to become a full-fledged bird-watcher. Birds of every kind, plain and pompous, playful and predatory, abound in your own backyard—the office. DR&MI's overburdened editors, believing that anyone up a tree is fair game, have long been bird fanciers. Here they summarize their findings in a guide for the quick identification and easy classification of some of the commoner desk varieties.

Ex-Carrier Pigeon

He wore scrambled eggs and gold insignia during one of our World Wars as a bearer of top-secret messages, and conceives his present business command as a staff and line T/O. He invariably greets new employees with, "Glad to have you on board," and he charts new courses over troubled waters in a taut ship. His office gear is always shipshape, and his memos brief, paragraphed, and numbered. He has a bulkhead on his shoulders, and his handshake's like a winch. When he finishes harboring ideas, he launches programs. A smart crew salutes him often.



Pill-Billed Raven

His desk drawer is a medicine cabinet, and he has more medical vocabulary than a drug clerk or interne. He takes more pills than any man or woman in the office, and gives more useless medical advice than any quack in the community. His diagnostic talents are seldom limited to his own ailments, but he wholesales his pharmacopœia without charge. He is glib in references to Jung and Freud, and loves terms like *psychosomatic*. He craves pills—any kind, whether vitamins, stimulators, or tranquilizers. Sometimes he needs a silencer.

Saurhebutted Harbinger

He always knows the answers, but seldom the sources. He is the cafeteria or cocktail bar consultant on company policy. He makes it a point to chat with top executives in the elevator or hallway. When death, pension, or resignation sets up a chain reaction of promotions and new assignments, he tries to outguess the president. He gets the habit of whispering, even when he asks you to lunch. He loves to perch on any line of communication. A wire overloaded with his own rumors often short-circuits his success.

Double-Breasted Lovebird

She is adored by half the office staff. The male half makes up to her, and the distaff puts up with her. She was hired for her looks because of the shortage of file clerks; but she was a little vague on her alphabet, and she pinched her fingers so often in the file drawers, she was transferred to the reception desk. There she helps visiting salesmen fortify their egos with wide-eyed questions. She can't type, she can't file, and she can't think, but her plumage is breathtaking. If she makes any mistakes, it won't be in her homing instincts.

continued on page 79

Of course Olsen gets around. His '57 Ford makes traveling a cinch. He eases through city traffic and laughs at long highway stretches. He arrives fresh and alert for client meetings all over his territory. He's proud of Ford's big-car size and prestige. He rides protected in a stronger, more solid, all-new body and frame in his *New Kind* of FORD. He likes the silent, comfortable ride. In fact, Olsen just plain *enjoys* driving his '57 Ford.

Olsen's company is mighty pleased with that '57 Ford, too. They like Ford's low initial cost . . . are delighted with its low cost of operation and maintenance . . . and Ford's traditionally high trade-in will provide another savings for them. Why not see your Ford Dealer about new '57 Fords for your fleet? Make sure *your* "Olsens" get around!

FORD FLEETS ARE LOW-COST FLEETS!

A banker talks

Some noon hours he only listens.

But talking, or just taking things in, a banker gets to know what his neighbors think.

This is necessary because a banker has to know a community inside out before he can give it financial guidance, and put its idle money to work in wise and profitable ways.

So bankers live and work in the communities they serve. They share the ups and downs of home-grown economies. They lend a sympathetic ear to individual problems and offer advice or counsel when it is sought. And they willingly accept the civic leadership placed in their hands by neighbors.

Participating, talking and listening, bankers build progressively better banks. The net result is that commercial banking today solidly underpins the American way of doing business, and has the respect of the American people.

The Chase Manhattan Bank is proud to represent and provide banking service in New York for more than 3,900 banks in towns, villages and cities from coast to coast.

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NEXT . . . CARBON PAPER RIBBON

NOW . . . COLUMBIA'S EXECU-TAPE

So clean you can see through it!

The cleanliness of Execu-tape is demonstrated by this photograph. The transparency of the roll shows that the edges are free from the slightest trace of carbon.

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PLANNING FOR PLANNING

continued from page 48

The aim was the improvement of work methods by the people who employed them, but the program was also utilized to show how change might be to their own interest.

Any program designed to make an organization adaptable to change must be continuous, must be sold in terms of the employee's own interest, and must be reasonable in terms of the organization's requirements. Gaining acceptance of change is a problem in applied psychology. In general, industrial training programs, like most academic programs, are inadequate in this respect.

Ten Principles of Change

The literature of planning is filled with the observation that human nature resists change. Like most generalities, this is only partially true. People welcome some changes. The objective of a planner is to make the changes he proposes seem desirable to everyone who will be affected by them. Out of our experience in planning for change, a few fundamentals have emerged:

Change is more acceptable when it is understood than when it is not.

Change is more acceptable when it does not threaten security than when it does.

Change is more acceptable when those affected have helped to create it than when it has been externally imposed.

Change is more acceptable when it results from an application of previously established impersonal principles than it is when it is dictated by personal order.

Change is more acceptable when it follows a series of successful changes than it is when it follows a series of failures.

Change is more acceptable when it is inaugurated after prior change has been assimilated than when it is inaugurated during the confusion of other major change.

Change is more acceptable if it has been planned than it is if it is experimental.

Change is more acceptable to people new on a job than to people old on the job.

Change is more acceptable to people who share in the benefits of change than to those who do not.

Change is more acceptable if the

organization has been trained to plan for improvement than it is if the organization is accustomed to static procedures.

People are no more born planners than they are born piano players. How can they be trained in planning?

The first step in learning to plan is to practice. This means that the individual must be given some specific planning to do. This has a dual benefit: It arouses his interest in the subject and exposes the problems. Once this is done, he is ready to accept the aids in the art of planning that have been developed by widespread experience.

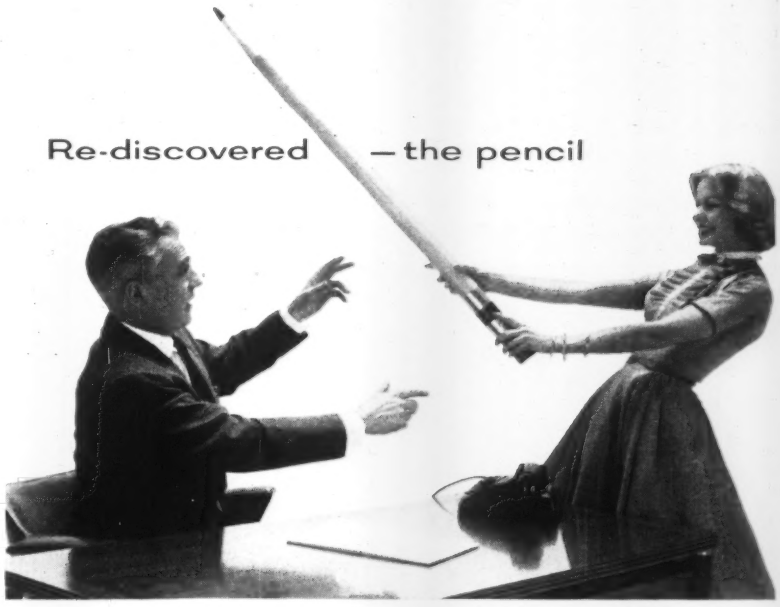
Six Approaches

In terms of broad categories, good planning requires the following approaches:

Step one is the identification of the problem or the opportunity. It is an old adage that a problem is nine-tenths solved when it is clearly recognized. The same is true, of course, of an opportunity. Thus specific planning should always be approached by first identifying the problem or the opportunity and clearly stating it for the benefit of all those involved in the planning project. Long-term planning, of course, involves a major element of anticipation, which in turn demands good forecasting, good trend researching, and good use of all available data and all experience within the organization.

Step two in the process of planning is the statement of the objective. It is possible that the objective (as well as the problem or opportunity) may be altered during the development of the plan. It is nevertheless important that it be stated as soon as the problem or opportunity has been identified in order to give direction to the effort. Sometimes analysis of the objective makes it evident that the project should be abandoned.

Step three is to assign responsibility for development of the plan to some one person. This categorical statement, of course, challenges the whole process of planning by committee. In many cases group discussion contributes importantly to the development of a plan, and there are a few situations where a committee can actually produce a plan without undue expenditure of man-hours



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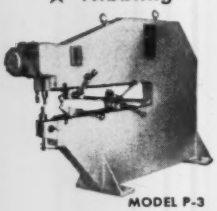

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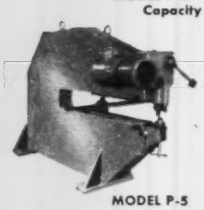

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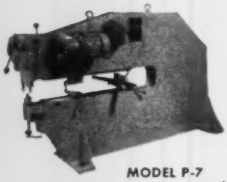

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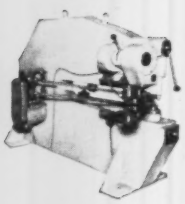

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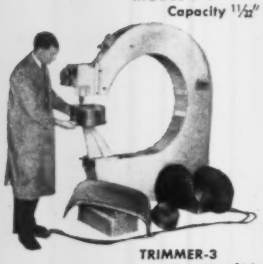

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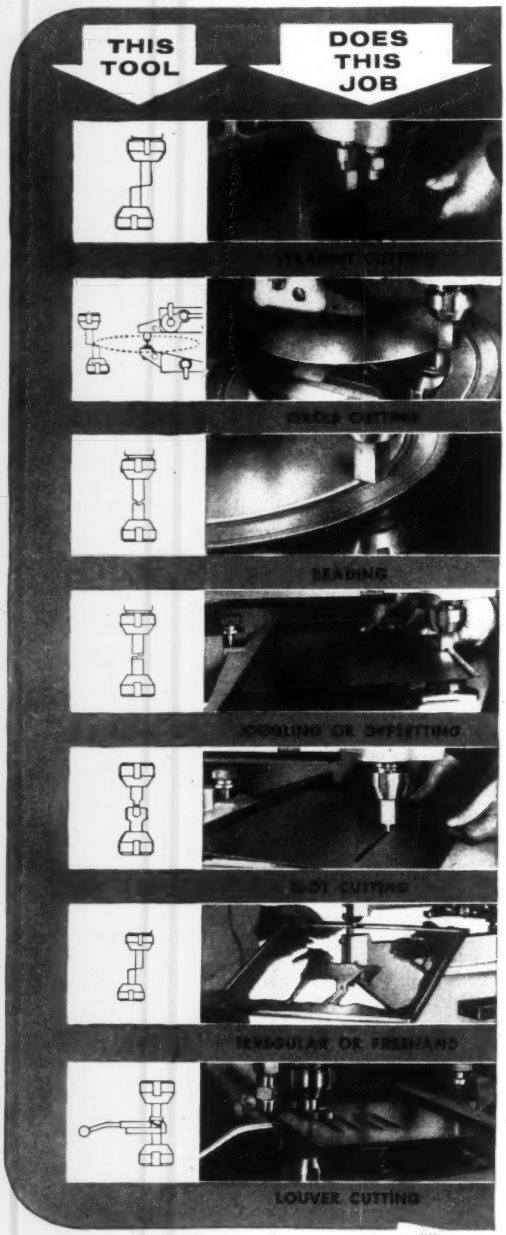

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and within appropriate time limits. But, in general, planning is best done by a single person who can be held accountable for the quality of the plan, the cost of its development, and the time spent. Along with the responsibility he must be given authority to call together the people who can contribute to the development of the plan, and to require production of data needed in its development.

Step four is the assembly of data. This, of course, requires coordination of affected organizational elements, proper search of minds and files for past experience, adequate checking of the experience of others where available, and independent research to develop new information. The most difficult phases of data assembly are: first, the identification of what is needed; second, the identification of the controlling factors.

Step five is the analysis of the data, re-analysis of the problem, the opportunity, and the objective, and the development of alternative proposals. A common weakness in planning

SIX BENEFITS OF LONG-RANGE PLANNING

"Corporate long-range planning is organized planning to achieve optimum results in the development of total company operations for the practical future—usually five, ten, or twenty years," said William E. Hill and Charles H. Granger, management consultants, at an American Management Association conference last Autumn. They pointed out that a long range planning program can:

1. Keep the company from lingering too long in low-profit or no-growth fields.
2. Give it the jump on competition in frontier research fields (such as missile guidance and applications of atomic energy), where there is no immediate payoff but a bright future for those who engage in research now and gain experience and know-how.
3. Provide a gage of future capital and physical requirements.
4. Raise the company's standing in the eyes of banks, insurance companies, and other sources of capital. (Sound long-range planning is also an effective deterrent to "raids" from outside, since it demonstrates to stockholders that management is handling company affairs wisely.)
5. Strengthen the organizational structure by developing executives who will be ready and able to integrate additional future operations into the corporate set-up. High-caliber men are attracted to a company that has a sound plan for future growth.

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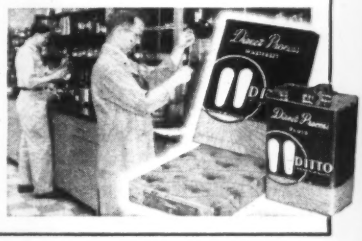

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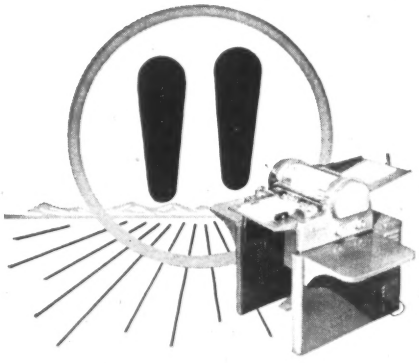

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is the failure to consider alternatives. Why do it at all? Why do it now? Why do it this way? The relatively modern process of brainstorming to exhaust the possibility of alternatives is effective when skilfully applied. The more difficult process of training people in creative thinking may be even more productive.

The final step in the technique of planning is the identification of the solution after evaluation of the alternates. This requires an understanding of the economics of alternate choices—an understanding that is both vital and difficult to acquire. It calls for the ability to apply such complex concepts as fixed costs, sunk costs, tax consequences, the time value of money, and overheads. The solution must, of course, be practical in the sense that it can be carried out, and it must identify the person or group in the organization who can best carry it out.

The foregoing are the classical steps in good planning. Training is needed to understand them. Planning is needed to insure that the training is done.

Organization for Planning

The last important requirement is the organization of a specific system to get planning done. Everyone in industry who has to produce a material thing, or deliver it, or sell it, organizes a system to get that job done. Yet the same people commonly assume the planning to improve systems of producing, delivering, or selling will somehow get done without a system to compel achievement. This simply is not true. At least it is not true if the objective is adequate planning as distinguished from casual planning.

The first thing involved in the development of a system of planning is the assignment of responsibility for the planning, and that, in turn, calls for the identification of areas of functional responsibility within an organization. In addition, it presupposes that there has been careful organization planning, and that the planned organization structure is already in effect. Otherwise widgit planning may fall into the hands of the wadget experts, and vice versa. Good organization planning and good application of organization planning principles are prerequisites to adequate planning by any institution.

After the functional organizational

President of Proctor Electric reveals the facts about his new plant in Puerto Rico

Mr. Walter M. Schwartz, Jr.

Over 500 U. S. manufacturers have opened new plants in Puerto Rico in the past six years. The Proctor Manufacturing Corporation is one of them. Here is a report from Mr. Schwartz, President of the Proctor organization, on the progress his subsidiary plant has made.

The story of the Proctor Corporation's new venture is typical of scores of U. S. firms which have expanded their operations to Puerto Rico. Note the facts well. Then make your own deductions.

Q. Mr. Schwartz, what does your Puerto Rican plant make?

A. Electric irons. Our plant in Puerto Rico produces all our irons, and production is now at capacity. However, Proctor irons are so well accepted by consumers in the U. S., we can't keep up with orders.

Q. When did you set up shop in Puerto Rico?

A. About three years ago. But since then we have more or less doubled the size of our operation. We now have at least 200 workers and we plan to expand even more.

Q. What do you think of Puerto Ricans as employees?

A. The facts speak for themselves. Many key positions next to Mr. Robert Ransone, top executive of our Puerto Rico plant, are filled by Puerto Ricans —for example, the production manager, the quality control engineer and the traffic manager. Among the employees who have been with the company for two years, only *three* have left. Absenteeism is below 3%.

Q. Did you have any difficulty training Puerto Ricans?

A. Mr. Ransone reports no trouble at all. Over 80% of our personnel are high-school graduates and bilingual. Maybe their training did take a little longer than the average in Philadelphia. But Bob Ransone puts that down to unfamiliarity. We have always ended up with good, reliable workers.

Q. Has your Puerto Rican plant been profitable?

A. Definitely. Our figures are not spectacular, since we stopped production several times for re-tooling. But in spite of this, we made a fair profit in 1956. We didn't have to pay *any taxes* on this profit and we regard the result as satisfactory. We should do even better this year. Our irons are selling like hot cakes and we are already working two shifts.

Q. Why did your company choose Puerto Rico as a plant site?

A. Four major things influenced our decision. One—the availability of willing and intelligent labor. Two—the tax exemption program. Three—the help given by the Commonwealth in providing a suitable building in a good location. Four—the Government assistance in training and staffing the whole operation. But, now we are all set up, the thing we appreciate most is the wonderful business atmosphere of Puerto Rico.

Q. How does Mr. Ransone like living in Puerto Rico?

A. Bob Ransone loves the place. He would like to stay there for good. However, I think he's a bit biased. You see, he suffered terribly from arthritis. And now he says it has disappeared completely. What's more his wife and family like Puerto Rico, too. Mrs. Ransone is delighted with the schools and says the open-air life is doing her children a world of good. All in all, I would say we have a very happy family there.

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areas are identified, the individuals in charge of these areas must be made responsible for plans to improve the work of their units. This calls for specific assignments. One of the techniques we use with great success at The Cleveland Electric Illuminating Company is to require everyone who prepares an annual budget (and budgets are developed rather far down in our organization) to turn in a planning section with his budget. In the planning section each must list all of the specific planning he proposes to do during the coming year. This has stimulated a vast amount of short-term planning in every area in the company.

Long-Term Adjustment

Separate long-term planning reports are also required from the same organizational units, but less often. Requests for these reports specifically identify the period of time to be covered—five years, ten years, or more. This, too, has been effective. It compels planning, and it puts the responsibility in the hands of the people who are responsible for action and have the most information about the things that affect action. It means that time must be set aside to get the planning done. To the extent that a specific periodicity is established, it brings about regular review so that the plans do not become obsolete. It works.

The next step in a successful planning system is the provision of time in which to do it. Lawrence Appley, president of the American Management Association, once said that all management problems involve only three things: first, the assignment of a job to a person; second, the provision of time to do it; and third, the

"I've been thinking, Holgar—perhaps we ought to try another line and give up catering to the carriage trade."

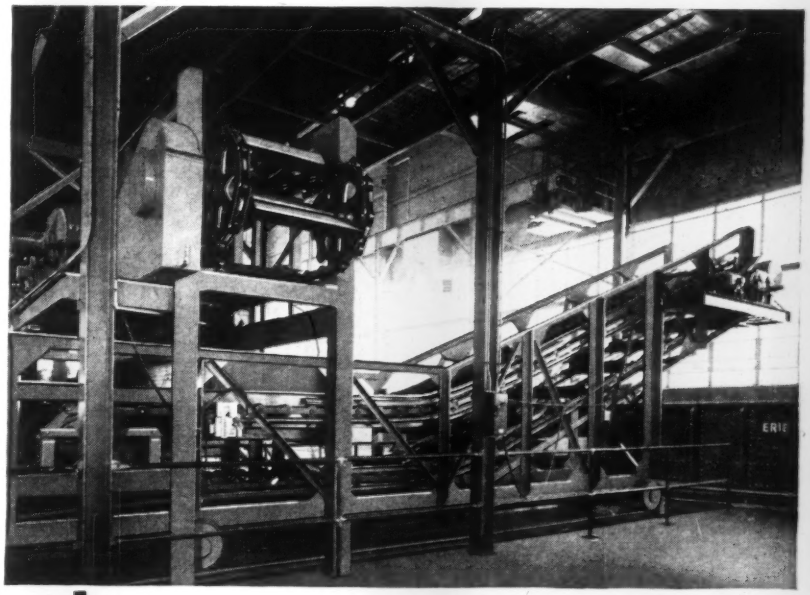
requirement that he report back when it is done.

One of the reasons why long-term planning is so difficult to achieve is that too little time is provided for it. Short-term tasks have a way of exhausting the work day. The seeming compulsion of the daily mail, the daily dictation, the daily meetings, and the incessant telephone tend to use up the time needed for long-term planning, and the projects remain in the upper left-hand drawer of the desk or the outer spaces of the mind, neatly pigeonholed. Thus, a planning system requires the specific provision of time—adequate time—to get the planning done. If this is not done, daily activity will choke it to death.

Finally, a system of planning must provide for at least as much supervision during the process of planning as is accorded any other activity. Supervision of the execution of a plan is almost automatic in most organizations. But supervision of the development of a plan tends to be neglected. The system must provide for timely target dates, for periodic review of the status and progress of planning, for access by the planners to those in control of policy, and for scheduled reporting. Reporting is important. Nobody likes reports; nobody likes to write them; nobody likes to read them. But without them nobody is informed of the progress of planning.

Thus, the administration of the process of planning calls for adequate planning in and of itself. Without planning for good administration of planning, the possibility of adequate planning in an organization is remote.

THE AUTHOR • Ralph M. Besse joined The Cleveland Electric Illuminating Company nearly nine years ago and has been its executive vice president for the past four years. Previously he practiced law for 19 years as member of a law firm in which he was partner for eight years. He holds a JD degree from the Law School of the University of Michigan and an AB degree, *Magna Cum Laude*, from Heidelberg College. In addition to being director and president of the Ohio Electric Utility Institute and a director of the Cleveland Trust Company, he is currently active in judicial, educational, Army Ordnance, and religious organizations.



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PREMIUMS ON THE INSTALLMENT PLAN

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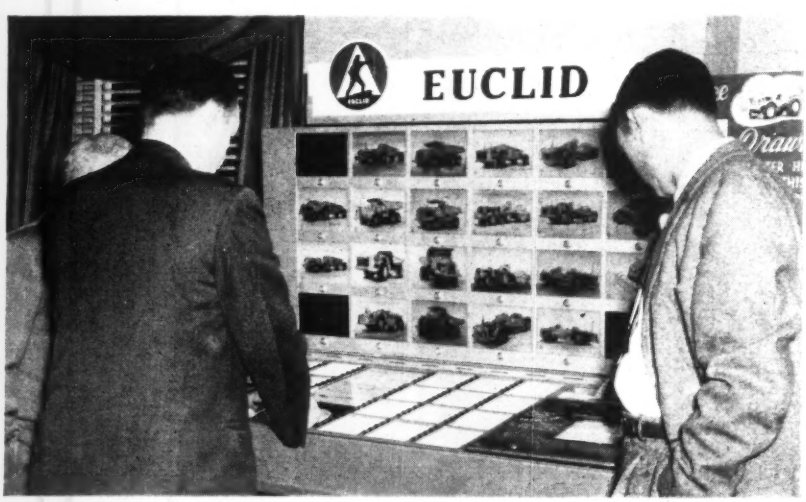
THE PREMIUM CRAZE and the installment buying urge are being blended for the first time in the cigarette industry. Premiums on the installment plan aren't new: Jewel Tea Company has had such a plan for housewives for years. Larus & Brother Company is preparing to offer smokers a plan by which they can take their premiums now and pay for them in coupons later. Results are not yet in from Portland, Me., and Worcester, Mass., where the plan was being tried out last month. If sales leap in these two test markets, you can expect the pay-as-you-smoke plan to be offered on a nationwide scale.

Here's how it works: The smoker selects a premium from the catalog that comes with a carton, signs an installment agreement (which is made to resemble a legal document but is not really enforceable), makes a down payment of fifteen coupons (which also come with the carton), and gets his premium. For example, to get a bathroom scale the buyer would promise to pay 25 coupons (or 25 cents) a month for 28 months. One coupon comes with each pack.

So the smoker would be promising to purchase almost a pack of Holiday cigarettes a day for more than two years. The company would be able to project its production many months in advance and would be assured of a firm market for years ahead.

But even if the tryout shows an

How to stop traffic at a trade show



By using this new electric display gadget, which somewhat resembles a pinball machine, one manufacturer came away from a trade show with more than 2,000 registrations. Here's how it worked: The prospect selected one of the 24 subjects on the lighted display board and pressed buttons to get the answers he wanted on such things as price, features, design, and so on. The unit, which is produced by the Visi-O-Matic Corp., 748 Standard Building, Cleveland 13, O., also provides registration forms.

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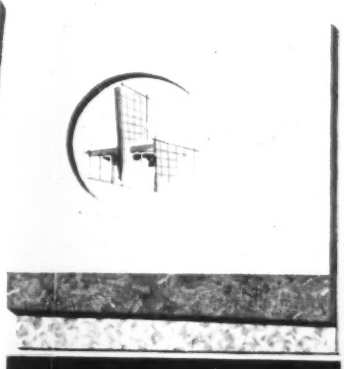
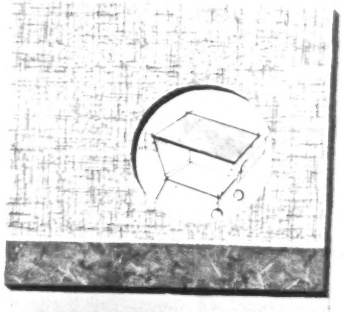
Aluminum and other thin-gauge metals are immeasurably strengthened with a Masonite hardboard core. Rigid and dense, it resists dents...absorbs shock.



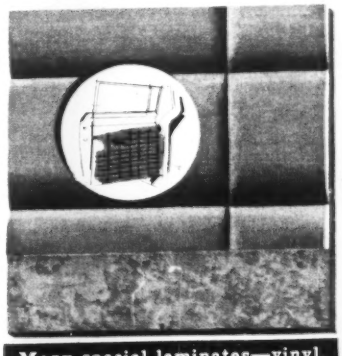
Colorful, cleanable porcelainized steel gains strength and stability with Masonite grainless panels for a core. They never split, splinter or crack. Resist moisture.

Expensive, exotic woods, veneered to Masonite panels, now enrich the value of many home and office furnishings—efficiently and economically. A designer's delight!

From metal to paper– Plastics to wood– Your best base for laminates



Plastic laminates, in linen, wood grains and a variety of other finishes bonded to stable Masonite® panels, create new standards of beauty and usefulness.



Many special laminates—vinyl, cloth, paper—may be bonded or fastened to these even-structured Masonite panels—the only complete line of hardboard...a type, thickness and size to meet your production requirements.

"Masonite Corporation—manufacturer of quality panel products"

WYANDOTTE CHEMICALS

Robert Faegre tells how MANDO brings you more than...

75 products from

1 **Robert Faegre, president,** Minnesota and Ontario Paper Company, points out that at the present time, paper and paper-product consumption is 415 pounds per person a year . . . and the demand continues to grow! That is why the science of wood, and its products, must keep moving forward. And though the road to successful research is long and tedious, MANDO is constantly developing new products that insure better living. At Wyandotte, too, research keynotes chemical advances, which help improve manufacturing processes; make today's products good, tomorrow's products better.

a tree!

"We are in a cellulose age," says Robert Faegre, "an age where there are no limits to the possibilities for development.

"At the present time, Minnesota and Ontario Paper Company is making over seventy-five products — more than fifty types of paper, including specialty kraft, groundwood, sulphite, coated papers, and labels; and twenty Insulite fiber-board products. In addition, we produce and treat telephone poles, railroad ties, and other forest products.

"We, at MANDO, are ever striving to fill the growing demand for cellulose products. For example, to help meet the increasing need for newsprint, we have recently completed a $20 million project designed to boost daily production from 400 tons to 700 tons.

"Without a doubt, chemicals play a vital role in the production of paper and cellulose products . . . from the time the trees become chips, until they are converted into the final product.

"Experience has proved Wyandotte to be an excellent source for a number of chemicals basic to many of our manufacturing operations."

Wyandotte produces a wide range of quality raw-material chemicals . . . for practically every business you can name. How about your business — may we serve you? Talk over your requirements with a Wyandotte representative today. Or write in detail about your product or processing problem. *Wyandotte Chemicals Corporation, Wyandotte, Michigan. Offices in principal cities.*

Wyandotte

CHEMICALS

Pacing progress with creative chemistry

2 **MANDO'S loggers harvest** more than six million trees yearly from its own forests for use in paper and cellulose production. Wyandotte, too, owns natural resources — insuring uniform quality of chemicals from the start of processing to the completed product.

3 **Typical end uses** for MANDO paper include books, magazines, and newsprint; packaging for a variety of products. Wyandotte supplies chemicals to makers of many packaged products: foods, beverages, chewing gum, medicinals, cosmetics, inks, dentifrices, to list a few.

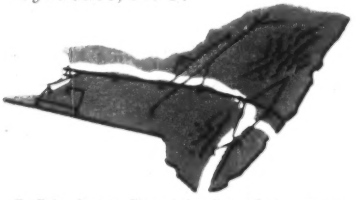
4 **To keep abreast** of the ever-changing needs of industry, Wyandotte maintains one of the most advanced, modern research centers in the chemical business; and one of the finest technical-service departments. Both are staffed by skilled, experienced personnel.

"UPSTATE, N.Y."

WHERE to put a new plant . . . warehouse . . . office? At the top of any list are advantages which Buffalo, in Upstate, N. Y.'s Niagara Frontier area, has been offering for over a century.

One is a sound "industrial state of mind". Another is a large, highly-skilled and cooperative labor force, plus excellent transportation, with swift, short hauls to rich markets. Niagara Mohawk helps with a building program that assures its customers plentiful, low-cost power for future needs.

Entire Upstate, N. Y. offers the necessary ingredients for success and expansion. It's a great place to live, too, with fine vacationlands in your backyard. Learn more about the healthful business climate of the vigorous communities of Upstate, N. Y. Write Earle J. Machold, President, Niagara Mohawk Power Corporation, Syracuse, N. Y.



Buffalo, Queen City of the Great Lakes, is the second largest city in New York State. It's the western terminus of the New York State Thruway which runs through the heart of the Niagara Mohawk System.

powered by
NIAGARA
MOHAWK

NIAGARA MOHAWK

initial acceptance of the plan Down East, this will certainly not prove smokers will stay with one brand for such a long period, particularly for the purpose of paying off a debt.

Researchers have discovered that one of the obstacles to be overcome in selling cigarettes is the guilt feelings many people have about smoking. The urge to smoke is a sensuous one that scarcely combines with a sense of obligation. So perhaps Holiday cigarettes are heading for trouble in creating an obligation in coupon-debts (and resultant guilt feelings) as an incentive for smoking the brand. The current theme in cigarette ads is "pure, real pleasure," which the smoker is told he certainly deserves.

Of course, smokers may and should feel no more uncomfortable about a debt in coupons than consumers do over the billions in installment debts.

How to wheel and deal

As goods become more plentiful and competition quickens, manufacturers find that they have to resort increasingly to "wheeling and dealing" to get valuable shelf space for their products in the consumer market. The director of merchandising for Doyle, Dane, Bernbach, Inc., an advertising agency, has come up with a provocative study of trade deals.

Judging by the examples that E. B. Weiss has collected for this study, manufacturer-dealer relations are becoming a tug-of-war, with the producer on the slipping end. Says Mr. Weiss: "We have yet to see a truly complete list of the innumerable forms of concessions won by large retailers from their suppliers. Indeed, a complete list will never be compiled—first, because so much of this is 'under the table' and, secondly, because a list compiled today would be outdated tomorrow.

"But it isn't unheard-of for some mass retailers to win a considerable part of new store and renovating construction costs, or check-out gates, paint jobs, and so on from suppliers.

"The 50-50 advertising allowance has reached a point with one chain where certain categories and brands are thrown out unless the allowance is 100 per cent of a not-too-accurate line rate; thus the suppliers wind up at the 125 per cent mark. Some retailers have also won 'production costs' as well as 50-50 on blown rates and, of course, production costs can be as variable as the winds. A large appliance chain is reported to earn a fabulous $2,000 a week profit on its television cooperative ad allowance.

"Rates for shelf space and position and frontage are pretty well fixed in certain outlets. Ditto for rates on window display—with no assurance that the space paid for inside the window may not be covered over with stickers on the plate glass, paid for by another supplier.

"Rates for shelf-extenders, for dump displays, for aisle displays are subject to negotiation, with the seller very much in the negotiating saddle. Some large retailers charge all toll calls to suppliers. Radio and television stations owned or controlled by retailers somehow come up with manufacturer sponsorship that other stations appear unable to duplicate.

"In certain fields the manufacturer absorbs warehousing expenses and delivery costs to the individual stores, has his men maintain displays of merchandise, and check and even re-

SANTEE RIVER WOOL COMBING CO., JAMESTOWN, S. C.—This plant, the second wool processing plant in the south, of 20 million pounds capacity per year, is planned for expansion to 80 million pounds. This is the southern unit of the Branch River Wool Combing Co. of Rhode Island, owned by Amédée Prouvost of Roubaix, France, one of the two largest wool processing firms in the world.

LOCKWOOD GREENE
ENGINEERS-ARCHITECTS
Boston 16, Mass. 316 Stuart Street
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Spartanburg, S. C. Montgomery Bldg.
OVER A CENTURY OF INDUSTRIAL PLANT DESIGN EXPERIENCE
Brochure available on request
DANIEL CONSTRUCTION CO., BUILDERS

ED
ELECTRO DYNAMIC
The mark of an Extra Dependable machine
POWER
for the
food and meat industries
It takes rugged power to move hundreds of pounds of food and meat for processing and packaging...the kind of *power* that Electro Dynamic *standard* and *special* motors furnish.
The red E. D. "power spot" is your assurance of *extra dependable* Electro Dynamic power... over 75 years in developing . . . yours today *at no extra cost!*
ED
ELECTRO DYNAMIC
DIVISION OF GENERAL DYNAMICS
CORPORATION
BAYONNE, NEW JERSEY
GD
GENERAL DYNAMICS

plenish inventory. The manufacturer also pre-packs, pre-tickets, pre-prices, and his men may open the shipping cases. These same men will arrange for complete promotions, including related products not made by the company and, in some instances, the related products are the retailers' own controlled brands.

"Manufacturers supply demonstrators—put their own people on the retail floor by days during special promotions. They pay part of the salary of retail sales people. They pay for coupon handling. . . . Some stores insist that suppliers pay postage on statement enclosures, although the envelope carries the store's statement. Some stores expect liberal return privileges and not only in colors, sizes, and so on but to the point where merchandise is really out on consignment or memo. They expect liberal free samples and contributions to their favorite charities.

"Efforts have been made to get suppliers to underwrite the cost of lost, strayed, and stolen shopping carts. Cash discounts are taken when not earned. The burden of repairs is being shoved off onto the manufacturer as fast as possible.

"We can pass by the matter of entertainment, door prizes, and contests when buyers visit showrooms. The total payment made by manufacturers for retail fixtures will never be known but it must be enormous. Contests for sales people, window display contests, and round-the-world trips for buyers all add a tidy sum to the mass retailers' take.

"Price concessions in innumerable forms abound. The Robinson-Patman Act has had little effect in controlling this form of allowance. A list of concessions a yard long could easily be compiled. . . . It is entirely possible that manufacturers will wind up underwriting the cost of the trading stamp mania sweeping the nation. The promotional allowance covers a multitude of services—most of them seldom rendered or rendered efficiently. The National Association of Retail Grocers has pointed out that the salary of the store buyer is paid for, in some instances, by suppliers. It also commented on an 'almost inexhaustible list' of other allowances.

"Yes, the list is endless. And in this age of pre-sold brands, of self-service and self-selection made pos-

sible entirely by billions of dollars of advertising by manufacturers—in this age of pre-packaging, of self-propelled merchandise movement—this list is far, far longer than it has ever been in the past.

"Perhaps more advertising—better advertising—constitutes a sounder investment than the trade deal under certain circumstances. Even in fields overrun by deals, there usually is at least one manufacturer who pre-sells as strongly as possible and offers no deals."

If you'd like a free copy of this study, *130 Tested Trade Deal Strategies and Their Tactical Development*, write to Doyle, Dane, Bernbach, 20 West 43rd St., New York 36.

Gasconade

In recent years oil companies have been marketing their gasolines like vitamin preparations. Many imposing claims for varied ingredients labeled with odd assortments of letters have been the main approach.

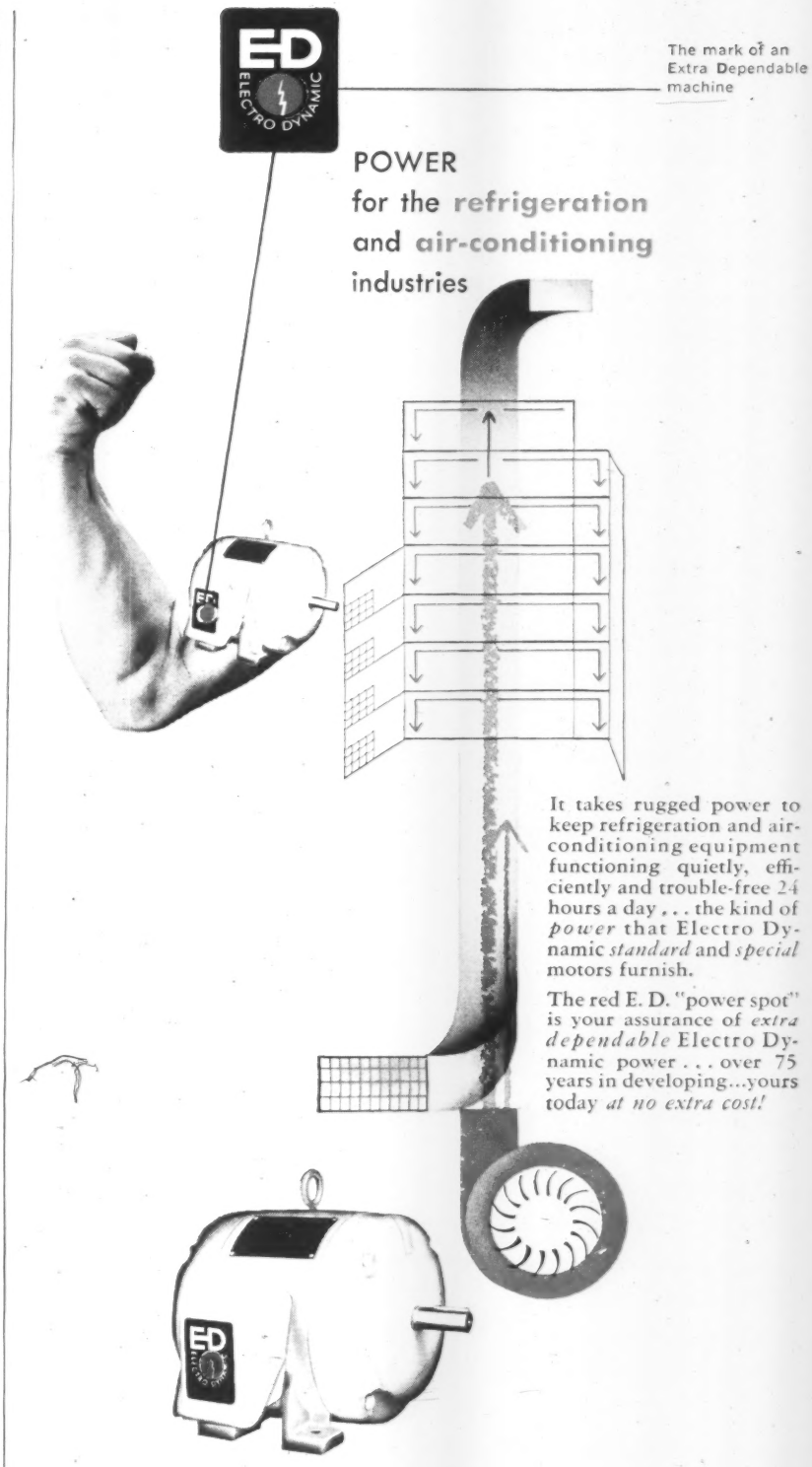
However, now comes a survey in depth of 250 motorists, conducted by University of Chicago psychologist William Henry, that challenges this approach. According to Dr. Henry's findings, most motorists feel there is little difference among gasolines and they are immensely unimpressed by technical claims for any particular brand. They realize that gasoline runs a car, but that is about as far as their knowledge goes. In fact, only one in five had any notion of the concept of combustion. Most said they thought ethyl and octane were good but had no idea why.

They feel that good car performance comes from the car itself and is not affected by the particular gas used. Brand loyalty is distressingly weak according to this survey. Only about one-third are loyal to a particular brand, while nearly half had no preference whatsoever.

When a brand preference is developed, according to Dr. Henry, it is not for the product but rather for the company. And the picture of the company that the motorist gets is the result of the personality of the attendant and the cleanliness and convenience of the station.

The survey was paid for by the *Chicago Tribune* so that it can help oil companies communicate more effectively with their audiences.

The moral for companies, in lines


ED
ELECTRO DYNAMIC
The mark of an Extra Dependable machine
POWER
for the refrigeration
and air-conditioning
industries
It takes rugged power to keep refrigeration and air-conditioning equipment functioning quietly, efficiently and trouble-free 24 hours a day . . . the kind of power that Electro Dynamic standard and special motors furnish.
The red E. D. "power spot" is your assurance of extra dependable Electro Dynamic power . . . over 75 years in developing...yours today at no extra cost!
ELECTRO DYNAMIC
DIVISION OF GENERAL DYNAMICS
CORPORATION
BAYONNE, NEW JERSEY
GD

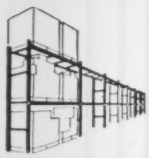
Good Warehousekeeping the *American* way

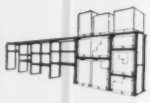
means every item of your live storage is easily and quickly accessible

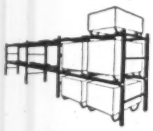
KNOW where every item in your stock is located. Protect your stocks against damage. Speed and simplify inventory taking. American Racks are quality built . . built to withstand rough, tough usage year in and year out, in any industry. The American way has proven to be the most economical and efficient way of handling live storage. Make us prove this fact. Distributors from coast to coast. Immediate service. Write us today.

AN EXCLUSIVE AMERICAN FEATURE
Patent No. 2,654,487

There's an AMERICAN STORAGE RACK for every storage need


Standard Pallet Racks


Adjustable Pallet Racks


Skid Racks

Coil Racks

Tool & Die Racks

Tiering Racks

Drum & Barrel Racks

AMERICAN METAL PRODUCTS CO.
STORAGE RACK DIVISION
5959 Linsdale Ave. amp Detroit 4, Michigan

other than gasoline: Research your advertising appeals carefully so that you don't talk over the heads of your prospects in terms that make sense only to your own technical people and those of your competitors.

The pen is mighty

When a market goes to pieces, do you face a Humpty-Dumpty situation or can it be put back together again? The market for ball point pens slumped seriously after the early frantic rush to get on the bandwagon in the immediate postwar years. Just seven years ago, ball points were known as "the pens that make four carbons and no original"; you couldn't give them away.

Then, in 1949, Paper Mate Company, San Francisco, brought out a pen with an ink it claimed would not leak, smear, finger-stain, or remain moist on the paper. Even so, no one wanted anything to do with it.

So Paper Mate set out on a determined selling procedure. Pens by the thousands went to bankers and educators. Retailers were offered six pens free, told to order more if the first lot sold. More dubious retailers found themselves with writing on their shirtfronts and the offer of a $15 shirt free if the ink didn't wash out. By 1953, Paper Mate's sales had increased from $15,000 the first year to $20 million. Today it outranks the next five manufacturers combined in dollar volume.

The whole ball point pen industry was on its way back up. Industry sales were $35 million in 1949, moved up to $44 million by 1952. In 1953 the sales figure was more than doubled, rising to $91 million. The figures for 1956 are not yet available, but signs point to something over $111 million. Compared to fountain pens, the ball points took 86 per cent of the pen market in 1956.

A good deal of this business comes from premiums. If, a few years ago, you couldn't give ball points away, today you have to fight them off. A New York City bank gives them to all new depositors. Chas. Pfizer & Company got word of mouth publicity for a new drug product with a pen inscribed: "This pen will write *Cortril* 4,210,170 times." A movie actress sent out 1,000 pens with her "Best Wishes." And another pen was freely distributed by a New Jersey undertaker. —T. K.

Silver-Tongued Trumpeter

Something of a goose at times, he flies blind in the upper strata. The boss can do no wrong. The company can do no wrong. The product is a peerless acme of its kind. He is quick to see one side of everything. His enthusiasm soars when management's ears are within hearing range. His stories are always subject to discount, and the discount rises when the hero of a story is himself. Outside the office, he is a public relations expert without portfolio. His motives are transparent to all, especially to the shoeshine boy with whom he holds high-level management discussions.

Scarlet Scavenger

He has a nose for news, especially if there is a slight taint in the air. He is devoted to spreading the truth when the truth is damaging to a reputation, but he is pleased at any time to give momentum to rumors. He talks importantly of his community service and club memberships, but he is most eloquent when reporting the romantic interests of associates. Marital troubles are among his favorite tidbits. Every office has one of these birds for a while, but he tends to drift on his own wind from job to job. Every pot-shot he takes hurts, but sooner or later the clay pigeon he smashes is himself.

Noodle-Headed Nuthatch

He always says the right thing at the wrong time, and the wrong thing to the right person. He has an uncanny art for pronouncing names wrong, as well as getting his names, places, and products mixed. He loves to use impressive words which don't always mean what he thinks they mean. He could call a *Parisian* a *parasite* and never bat an eye, and says *trite* when he means *terse*. Netted in flight in a personnel interview, the ladybird of the species may admit a *disparager* between her real and

SAVE TIME and MONEY
on price lists... parts lists... directories . . . catalogs . . . indexes . . . etc. . . .

JUST TYPE

PHOTOGRAPH

REPRODUCE

ACME VISIBLE

photo panels
the quick, easy way to reproduce lists...

Save time and expense of typesetting; your typewriter is your compositor. Each line typed on individual card. Revisions quickly made, listings added or deleted, page arrangements changed and illustrations or headings added.

Always available for instant reference or use, easily kept up to date in your office and under your control, conveniently and compactly filed.

Reproductions can be made any proportionate size and printed by offset, planograph or other methods of commercial or office reproduction.

DISTRICT OFFICES AND REPRESENTATIVES IN PRINCIPAL CITIES

Ask the man from Acme to show you examples

ACME VISIBLE RECORDS, INC., Crozet, Virginia

☐ Send us more information and literature on Photo Panels. B457

☐ We are interested in Acme Visible equipment for _____ (KIND OF RECORD) records.

☐ Have representative call. Date _____ Time _____

Company _____ Attention _____

Address _____

City _____ Zone _____ State _____

Our plant location specialists are at your service!

Whatever your needs for a new plant location, the Texas Power & Light Company's industrial specialists can give you the full facts about locations in the Texas Bright Spot . . . the area served by TP&L.

These men always have the facts up-to-date and readily available, because our business of supplying electric service takes them into factories, business offices, stores, homes and farms throughout our service area . . . a progressive 47,000-square mile section of North, Central and East Texas, comprising 466 cities, towns and communities.

Tell us about your needs for a new plant site. Your inquiry will be treated in strict confidence.

Consider these advantages . . .

- Center of a 27-billion dollar market
- Excellent transportation, providing access to national and world markets
- Favorable tax structure — no sales tax — No state income tax
- Reasonably priced, spacious sites with plenty of room to grow
- Ample, low-cost electric power
- Friendly, native-born workers
- Courteous, cooperative city and state officials
- Raw materials available from nearby sources

TEXAS POWER & LIGHT COMPANY

AREA DEVELOPMENT DIVISION

FIDELITY UNION LIFE BUILDING • DALLAS, TEXAS

stated age. Wild or caged, this innocent punster is a source of constant merriment to his fellow office workers, for he lets the chirps fall where they may.

Ugly Duckling

She married her job, and she's making the best of it. If beauty passed her by, there is an awkward grace in her manner, and a rough-grained charm under the gravel voice. She had to fight to get a job, and it would take a tougher fight to get it away from her. She knows where she's going and what she's doing every minute of the day. She may have a tart tongue, and even a command of brimstone epithets. The staff may love her and fear her, but they respect her for being the most dependable bird in the office. She flies as straight as a crow—but never off the handle.

Early Bird

His feathers are always immaculate and never ruffled. He alights at his desk early, and has all the mail sorted and his own answers planned by the time the punctual arrive. He watches late-comers like a hawk and disciplines the laggards under him with withering remarks. He listens in contempt to every excuse, justified or not. He knows the product, the price list, the catalog, and the shipping schedule, but he doesn't know people. No man can grouse about this paragon, but somehow, nobody loves him—not even the boss when he has to give him a raise in recognition of the example set to flightier members of the office flock.

Loggerheaded Mocking Bird

He is sometimes mistaken for the garden peacock or the house parrot, but his species is readily identifiable by those who share his habitat. He tries to be the boss's alter ego. Unconsciously, he imitates his superior's writing style and even speech mannerisms. In following up an instruction, he is tempted to overstep authority. He tends to be arrogant to

inferiors and pretentions to outsiders. As an imitator, he lacks the sense of fairness that a top executive would display in observing the spirit rather than the letter of the law. He mimics authority, but never understands it. Cocksure and bird-brained, he wears his boss's feather in his own cap.

Bald Eagle

He regards himself as a born leader, a native of high places, and symbol of America's growth. Descended from an ancient species of hawk, he is the most patriarchal of birds and flaunts his might in gloved talons. A bird of prey, he flies solo, raids companies, and makes feathers fly in a proxy fight. He delegates nothing and decides everything. He is almost extinct.

Honking Grackle

He lives by vicarious thrill. The little man who drops big names in sales interviews or casual conversation may be a fine producer or steady worker, but he is starved for excitement in his personal life. He wants to be around people who do things, who meet the world in large assignments, and get recognition for achievements. He is impressed by publicity, and is delighted to have his picture taken with a nationally known American bald eagle. He honks loudest in his home field among his smallest feathered friends.

Magpie

He loves to hear himself chatter, and there's no stopping him. He can't be cured, but he may be interrupted by artifice. The first step is to agree

The truck with "boarding house reach" INCREASES WAREHOUSE CAPACITY . . . as much as 50%

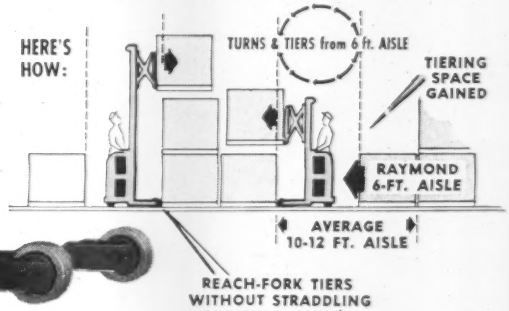
RAYMOND Reach-Fork TRADE MARK

3000 lb. CAPACITY

WHY BUILD OR LEASE additional storage when there's space to be had right in your present warehouse? A Raymond Reach-Fork . . . the truck with "boarding-house reach" . . . may increase your warehouse capacity up to 50%.

THE REACH-FORK eliminates wasteful 10 to 12-ft. aisles . . . permits you to tier in space-saving 6-ft.* aisles. No special racks or pallets required because it operates from the aisle, without straddling bottom pallet. Its forks extend to pick up or deposit your load . . . retract in seconds.

IDEAL FOR LOADING and unloading. Stacks pallets closely on racks, in truck trailers, boxcars, bulk storage areas. Safe on elevators and low-capacity floors. Raymond power unit is highly accessible, opens up like a book for ease in servicing. Reach-Fork available in 2,000 or 3,000 lb. capacities . . . may be leased or purchased over 1 to 3-year periods if you wish.


HERE'S HOW:
TURNS & TIERS from 6 ft. AISLE
TIERING SPACE GAINED
RAYMOND 6-FT. AISLE
AVERAGE 10-12 FT. AISLE
REACH-FORK TIERS WITHOUT STRADDLING BOTTOM PALLET . . .

MODEL E3RT Reach-Fork Electric Tiering Truck. Telescopic model, 3,000 lb. cap.

*For exact aisle width, ask Raymond representative to survey your operation.

THE RAYMOND CORPORATION

4631 Madison St., Greene, N.Y.

MAIL COUPON TODAY

Please send Bulletin on Raymond Reach-Fork. I am interested in:

- ☐ 2,000 lb. cap. Reach-Fork.
- ☐ 3,000 lb. cap. Reach-Fork.
- ☐ Have a representative call.

NAME _____ TITLE _____

COMPANY _____

STREET _____

CITY _____ STATE _____

To executives who should be concerned with their company's INSURANCE PROTECTION PROGRAM

Have you outgrown your coverages and the services that should go with them?

Many executives in your position are finding previously unrecognized inadequacies and extravagances in their companies' protection programs, created by business growth and by changing labor, tax and economic conditions. They are taking a new look at their new requirements—and at the facilities available to meet those requirements.

In this situation, we invite you to take a good look at Marsh & McLennan. You will find facilities, experience and knowledge that are meeting the exacting requirements of both large and small industrial enterprises in virtually every field of business. You will find authorities in all lines of insurance and a conception of performance that goes beyond the traditional services of a broker or agent to include engineering, loss adjusting, research and informed, impartial counsel. You will find us well equipped with a *continuing* service to meet *all* your insurance requirements.

There is no obligation in a preliminary discussion of your situation, and we invite your inquiry.

MARSH & McLENNAN

MARSH & McLENNAN-COSGROVE & CO.

Insurance Brokers

CONSULTING ACTUARIES • AVERAGE ADJUSTERS

Chicago New York San Francisco Minneapolis Detroit Los Angeles Boston Pittsburgh Seattle St. Louis Indianapolis St. Paul Portland Buffalo Duluth Atlanta New Orleans Tulsa Milwaukee Phoenix Cleveland Washington Montreal Toronto Vancouver Calgary Havana Caracas London

with him noncommittally. If he is your superior, you can "yes" him until there's nothing left for him to say but repeat it all over again, which he may do. If he's bawling you out for a real or imagined error of judgment, listen penitently until he runs through the cycle of blame and suddenly finds himself on your side. Of course, if he is a magpie junior grade, you can quietly wring his neck or you can tell him his ideas are for the birds.

Busy Platypus

He may look like any other common office bird in his gray pin-feathered suit, but his busy competence is a hoax. His nest is papered with unanswered letters, and he keeps them flowing into the "out" box with transmittal slips. He saves string, paper clips, and rubber bands, and is often seen by birdwatchers going through channels. He flits from task to task without finishing any. He likes to sit on a job, let his thoughts incubate, and clutter pigeon-holes. When he finally hatches an idea, he lays an egg.

Green-Backed Budgeter

His mission in life is to cut costs. He is so nearsighted that he often flies backwards—or sometimes in circles. He is more concerned about doing things more cheaply than doing them better, and would rather lose a big order than pay for a telegram to confirm it. He will spend weeks accumulating data on how to save postage, reduce phone calls, or slash overhead, but he forgets to report the cost of his own research. He shuffles between shakeups and shakedowns, and often gets his tail tangled in a net profit. His favorite nesting place is a slump.

—KENNETH HENRY

EAT, DRINK, AND KEEP TRACK OF IT

Entertaining business clients
Is a duty and a science,
Full of pleasures ineluctable
(Also income-tax-deductible).

RICHARD ARMOUR

from

order

to

invoice . . .

WRITTEN JUST ONCE

Just one writing—that's all you need to fill, ship and bill orders this new Ozalid *Direct Copy* way.

You start with an order filled out by your salesman or clerk. Ozalid copies, turned out in seconds, serve at every succeeding step. From *one writing*, you get receipts, labels, invoice—in fact *all* your paper work.

You save costly repetitious handcopying and retyping . . . eliminate copy errors and proofreading . . . get shipments and bills out sooner . . . improve customer service.

Ozalid *Direct Copying* ends wasteful "repeat writing" in every department. Cost? Less than a penny for a letter-size sheet of treated Ozalid paper—lowest cost per copy among all copying processes.

For the full story, call your local Ozalid representative today. His number's in the phone book, or send coupon below for more information.

OZALID®

DIRECT COPY SYSTEMS

A Division of General Aniline & Film Corporation
In Canada: Hughes Owens Company, Ltd., Montreal

Ozalid, Dept. C-4, Johnson City, N. Y.

Please send more information on how Ozalid *Direct Copying* can help us with our:

☐ Order-Invoicing ☐ Purchasing ☐ Accounting
☐ Production Control ☐ Receiving ☐ Engineering

Name_____

Position_____

Firm_____

Address_____

City_____ State_____

(Advertisement)

COSTS GROWING TOO FAST?

"Automating" your office procedures may provide one answer

The rising cost of doing business can be met in many cases by "automating" certain office processes.

Moore Business Forms (the largest company in its field) has developed procedures with Automated Data Processing—or ADP—which have proved of value to both small businesses and large.

ADP contributes importantly to holding down costs, thus increasing profits, by speeding work, reducing errors, making new employees unnecessary as business expands, improving employee morale.

Moore makes *no* machines—simply analyzes your problem . . . plans the proper ADP system for *your business* . . . designs and manufactures forms needed for maximum efficiency.

• • • •

Call the Moore man (he's in the telephone directory). Over 300 offices and factories across the U. S., Canada, Mexico, Caribbean and Central America. Or write Moore Business Forms, Inc., at Niagara Falls, N. Y., Denton, Texas, or Emeryville, Cal. No obligation, of course.

MOORE BUSINESS FORMS Inc

75TH ANNIVERSARY MOORE

Retail Tools Which Also Aid Suppliers

OPERATING RATIOS IN FIVE RETAIL LINES, 1955

	Retail Lumber Dealers	*Auto Accessory & Parts*	*Package Liquor Stores*	*Candy, Nut Confect'y Stores*	*Retail Bakeries*
Number of Concerns	297	134	277	153	247
Typical Net Sales per Concern	$287,150	$76,955	$83,850	$25,550	$53,510
Net Sales (%)	100.0	100.0	100.0	100.0	100.0
Cost of Goods Sold	75.5	65.6	80.3	64.2	58.1
Gross Margin	24.5	34.4	19.7	35.8	41.9
Expenses:					
Owner's Compensation	5.5	10.5	7.6	13.9	10.6
Employees' Wages	8.7	9.8	2.9	6.3	11.3
Occupancy Expense	1.8	4.7	2.9	8.5	6.1
Advertising	0.7	1.2	0.3	0.3	0.6
Bad Debt Losses	0.3	0.1	...	...	...
Delivery Expense	1.1	0.8	0.3	...	...
Supplies	...	...	...	1.3	2.9
Depreciation, Fixtures	...	...	...	1.7	2.5
License Fees	...	...	0.8	...	...
All Other Expenses	3.0	4.6	2.3	3.4	4.3
Total Expenses	21.1	31.7	17.1	35.4	38.3
Net Profit Before Taxes	3.4	2.7	2.6	0.4	3.6
Net Profit on Net Worth (%)	8.0	7.8	8.8	1.6	11.9
Net Worth Turnover (annual)	2.8	3.2	4.5	3.8	4.5
Inventory Turnover (annual)	4.3	3.9	5.9	11.8	18.7

RETAIL cost-of-doing business surveys have guided retail management in policing costs and protecting profits for at least 40 years. The demand for them has grown as management has become increasingly aware of the need for operating controls. These studies have also become popular with suppliers in their consumer relations.

- Many industrial concerns give their salesmen copies of retail cost-of-doing business surveys to hand out to customers, as a practical way to improve good-will.
- More manufacturers are using these studies to help marginal accounts spot and solve their problems, thereby salvaging outlets that might otherwise be lost.

Although designed primarily to help retailers find out where they

DESIGNED, ENGINEERED AND CONSTRUCTED BY

Wigton-Abbott CORPORATION

Research Laboratory designed and erected by Wigton-Abbott Corporation for the Gulf Research and Development Company at Harmarville, Pa.

Economic Surveys, Reports and Analyses

•

Development of New Processes and Equipment Installation

•

Industrial Design and Construction and Conversion of Existing Facilities

Wigton-Abbott Corporation
ENGINEERS & CONSTRUCTORS
Main Office
PLAINFIELD, N. J.

Est. 1924

Why NEW "150" HYDROHONER Is Economical . . . Compact . . . Standardized

Basic Micromatic "150" Machine, suitable for both internal and external Microhoning.

Now, even manufacturers with limited capital can afford Microhoning . . . with all its benefits including efficient stock removal, accurate geometry and controlled surface finish. The new Micromatic "150" Hydrohoner is the answer!

Because it is standardized and produced in quantity, this quality machine is economical. (Special engineering is limited to tooling and fixturing.) The design and quality of the "150" assures performance equal to more expensive honing machines. It has a 12" stroke and Microhones diameters up to 1½" . . . yet requires just 34" x 52" of floor space.

The Micromatic "150" is ideal for the manufacturer with limited capital, short production runs or a need for standby equipment. Immediate delivery from stock on basic machines.

The principles and application of Microhoning are explained in a 30-minute, 16mm, sound movie, "Progress in Precision"... available at your request.

☐ Please send me "Progress in Precision" in time for showing on _____ (date).
☐ Please have a Micromatic Field Engineer call.
☐ Please send Microhoning literature and case histories.

NAME _____
TITLE _____
COMPANY _____
STREET _____
CITY _____ ZONE _____ STATE _____ E

MICROMATIC HONE CORP.
8100 SCHOOLCRAFT AVENUE • DETROIT 38, MICHIGAN

are spending too much or not enough, cost-of-doing business studies have also found other useful applications in non-retail management.

- Manufacturers and wholesalers use them in granting credit. A thorough understanding of the customer's financial condition is essential to a sound appraisal of the credit risk. If goods are sold to various lines of trade, the typical cost-of-doing business may vary in each and become significant to credit analysis.
- Banks use these studies to calculate the strengths and potentials of companies before extending loans.
- Insurance companies find the studies valuable in appraising risks and writing policies.

To meet the growing demand, cost-of-doing business surveys for specific retail lines are being made and published by trade associations, trade magazines, newspapers, marketing research organizations, and even industrial concerns, which recognize that keeping retail outlets healthy helps keep the production lines healthy.

As a business service, DUN & BRADSTREET has prepared *Cost-of-Doing Business Surveys* on 27 different lines of retail trade since 1949. Typical figures for all concerns in each of the five retail surveys conducted in 1956 are given on page 85.

—ELMER SIVERTSEN

DUN & BRADSTREET RETAIL SURVEYS

Lines of Business	*Year of Survey*
Package Liquor Stores	1955
Retail Lumber Dealers	1955
Auto Accessory and Parts Stores	1955
Candy, Nut, Confectionery Stores	1955
Retail Bakeries	1955
Meat Markets	1954
Women's Accessory, Specialty Stores	1954
Juvenile Furniture Stores	1954
Camera, Photographic Supply Stores	1954
Floor Coverings Stores	1954
Women's Ready-to-Wear Stores	1953
Bars and Taverns	1953
Sporting Goods Stores	1953
Florists	1953
Jewelry Stores	1953
Men's Furnishing Stores	1952
Grocery Stores	1952
Family Clothing Stores	1951
Gasoline Service Stations	1951
Gift, Novelty, Souvenir Stores	1951
Farm Supply Stores	1951
Children's, Infants' Wear Stores	1950
Retail Shoe Stores	1950
Grocery and Meat Stores	1950
Lumber, Bldg. Material Dealers	1950
Restaurants	1950
Dry Goods, Gen'l Merchandise Stores	1949

Single copies available free on request from:
Public Relations and Advertising Dept.
DUN & BRADSTREET, INC.
99 Church Street
New York 8, New York

tions and rates checked against those of other employers. "The office employee," he says, "wants to know that he is not forgotten, that he and his work are looked at regularly, that consideration is given to what he has done. A good program displays his strengths—brings them to his supervisor's attention—and also shows up his weaknesses so that he may be given help in improving his performance. Work distribution must not be unreasonable. Fairness is the aim of this part of the program."

"It is also important," he continues, "to expose the employees to opportunities to improve themselves. They need to have an objective towards which they are heading. We try to develop everyone and bring them along for possible future promotion. Our key people are imbued with the necessity of developing successors. This not only encourages the office employees, but it also makes it possible for the supervisor to be moved up, and it gives the company competent people to choose from.

"The heart of our efforts lies in showing the employees that their company and their supervisors are really interested in what they are doing, and that they are considered to have a constructive part in the company's activities."

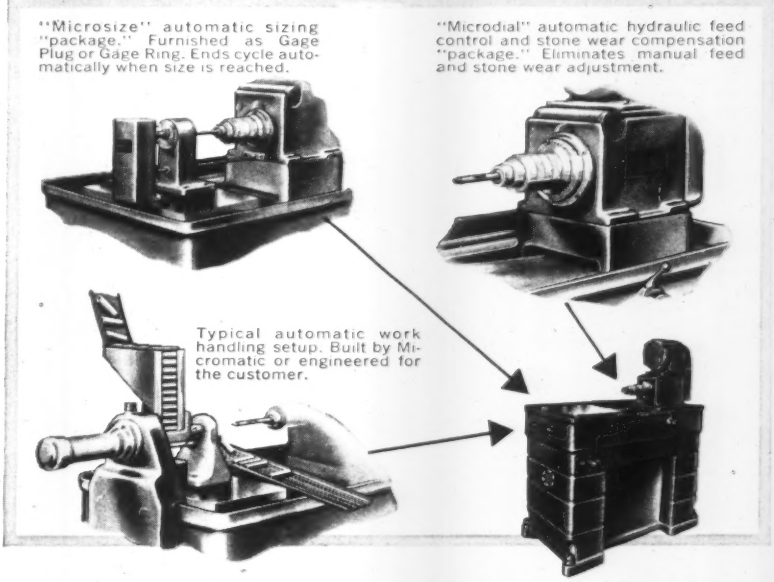
This corporation's headquarters staff has no packaged programs to offer local plants and offices; it has, after all, a staff function, and it works through personnel and industrial relations staffs in the scattered units of the company.

Participation Plus

In communications, two of this company's activities are worth noting. Through supervisory training, it encourages the holding of small group discussions on the immediate problems of the employees involved. It finds that these meetings increase interest in the work the employee is doing; they are one of the ways of granting more responsibility at lower levels in the organization chart and of affording the individual personal satisfaction in accomplishment.

Another kind of activity that the industrial relations chief says has been found to encourage employee identification with the enterprise is participation in industry-wide pro-

How NEW "150" HYDROHONER Can Be Automated to Any Degree . . . Easily . . . Economically


"Microsize" automatic sizing "package." Furnished as Gage Plug or Gage Ring. Ends cycle automatically when size is reached.
"Microdial" automatic hydraulic feed control and stone wear compensation "package." Eliminates manual feed and stone wear adjustment.
Typical automatic work handling setup. Built by Micromatic or engineered for the customer.

The basic Model "150" Hydrohoner is a new, standardized and economical Microhoning machine . . . priced for manufacturers with limited capital or relatively short production runs.

The basic machine features automatic stroking and hydraulic initial tool expansion and collapse. Various degrees of automation can be easily added at any time to the basic machine as required by individual manufacturers' needs. Micromatic "package units" which provide specific automation functions are illustrated. Design of this basic horizontal machine and its stationary bridge facilitate addition of these "package units". For complete automation of the "150" Hydrohoner, Micromatic will build automatic work handling devices or assist users in designing their own automation of work handling.

Send coupon for complete information.

Learn how Microhoning will give efficient stock removal, closer tolerances, accurate alignment and functional surfaces.

☐ Please have a Micromatic Field Engineer call.
☐ Please send Micromatic literature and case histories.

NAME_____
TITLE_____
COMPANY_____
STREET_____
CITY_____ ZONE_____ STATE_____ E

MICROMATIC HONE CORP.
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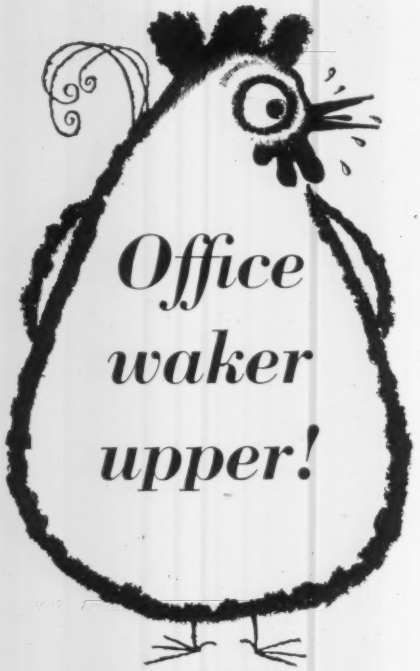

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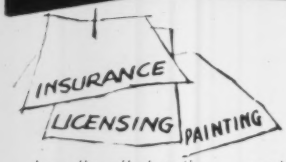
MAILOPENER
PITNEY-BOWES, INC.
1563 Walnut Street, Stamford, Conn.
... originators of the postage meter. ... offices in 101 cities in U.S. and Canada.

That's the MailOpener! Because it gets the morning mail opened and distributed earlier. Result: less time lost waiting for mail; the whole office gets a head start on the day's work.

- A PB MailOpener snips a hairline edge off envelopes as fast as they can be fed. Much faster than a steno with a stiletto! Opens every size and thickness of envelope, leaves contents intact. Safe, neat, quiet. Hand or electric models for every need. Even the smallest office can benefit from a MailOpener.
- **Free trial:** The nearest PB office will gladly put a MailOpener in your office for a free trial. No PB office near? Then write for free booklet.

FREE: *Send for handy desk or wall chart of Postal Rates with parcel post map and zone finder.*

WHY DON'T I MIND MY OWN BUSINESS!



TRUCKS are OUR business! Put all your time, worries, capital into YOUR OWN business!

Your local NTLS member-company will handle all details . . . maintenance, licensing, insurance, the other hundreds of headaches, *and furnish capital!* Full-service NTLS truckleasing furnishes everything but the driver. You "own" your fleet of fully-maintained trucks with a single invoice. ReLEASE yourself from "truck trouble." Write for folder.

NTLS
don't buy... LEASE

National
TRUCK LEASING SYSTEM
23 E. JACKSON BLVD. • SUITE D-4
CHICAGO 4, ILLINOIS
Members in principal cities

motion campaigns—in this particular company's case, Chemical Progress Week, which is being held the first of this month. Chemical Progress Week, sponsored by the Manufacturing Chemists Association, lays emphasis not only on national publicity and company institutional advertising, but on involving the industry's 830,000 employees in boosting their own industry. They are encouraged to carry the industry's story into their social organizations and to spread it among their friends and neighbors. Annually, more and more rank-and-file employees participate, and in selling others on the value of the industry and its company components, they sell themselves, too.

Easy Does It

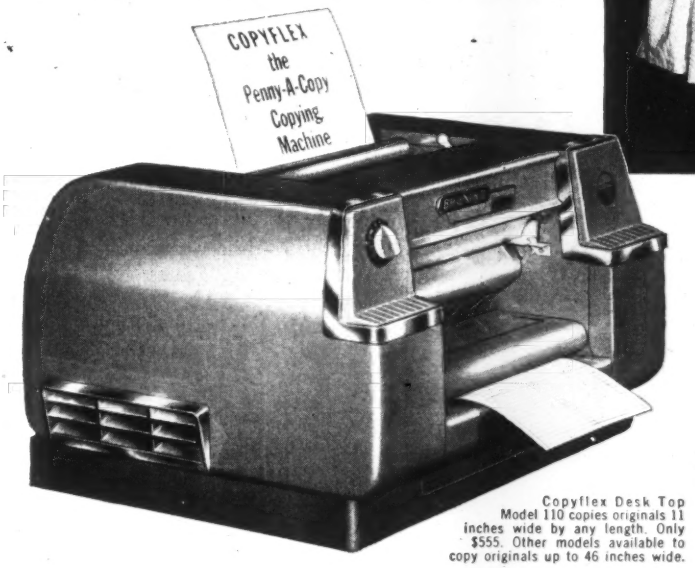
Although discipline in the office has undoubtedly been relaxed in the recent years of clerical-worker shortage, there appears to be no great concern about this fact among top personnel men. In fact, "excessively strict discipline is a killer," says the employee relations manager of a New York headquarters office. "There is less emphasis on discipline because that is the flavor of the times." His comment lends support to a point sometimes made by Professor Robert T. Livingston of Columbia University's Industrial Engineering Department: that today's workforce is a very different one from that of a quarter-century or so ago, because the trend in education these days is permissive, whereas it used to be authoritarian. With workers brought up on new methods emphasizing the value of the individual, employers must adjust personnel policies to the new kind of men and women. And they seem to be doing so.

"It seems to me, Hotchkiss, our public relations leaves something to be desired"

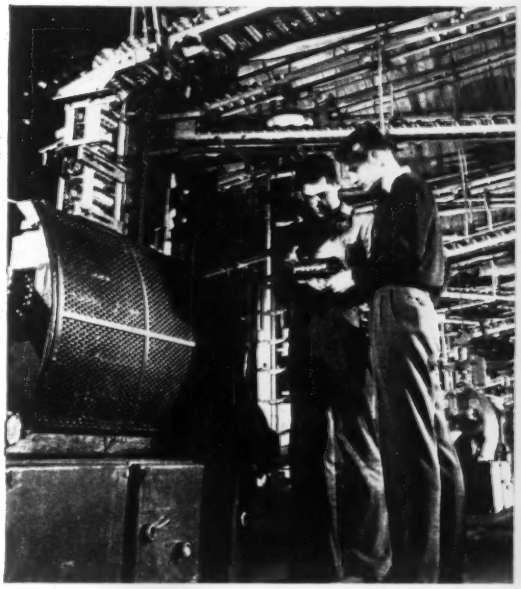
Like these Great Companies, You, Too, Can Use Copyflex One-Writing Method to...

Speed Paper Work, Slash Clerical Costs!

The Borden Company—Now marking its 100th year, and one of the nation's leading dairy, food, and chemical processors—uses Copyflex to get out important financial and accounting reports on a fast, one-writing basis. Operating and statistical statements, for example, are mechanically reproduced directly from the master work sheets. Copyflex eliminates any need for slow, costly manual transcription, assures fast and accurate processing of reports.



Copyflex Desk Top Model 110 copies originals 11 inches wide by any length. Only $555. Other models available to copy originals up to 46 inches wide.



American Can Company, America's largest manufacturer of metal and fibre containers, uses Copyflex to reproduce customer invoices directly from order originals prepared on receipt of customers' orders. These order originals are utilized again and again for multiple shipments. All of this is done without any rewriting or retyping of constant information from one form to another. Copyflex has speeded billing operations, reduced clerical costs and errors to a minimum.

Throughout America, progressive companies like those described here are simplifying and speeding business operations with the revolutionary one-writing method made possible by modern Copyflex copying machines. You surely can, too!

With Copyflex, you write basic information only once—the entire series of copies needed to complete any systematized business operation are mechanically reproduced from the original. You eliminate the big cost and delay for retyping or rewriting constant information from one form to another. This frees personnel for other important work, gives you tighter control of operations, saves thousands of dollars.

Copyflex machines are clean, odorless, economical—letter-size copies cost less than a penny each for materials. Copyflex will fit readily into your present systems. Mail coupon today—it can mean important savings for you!

BRUNING *Offices in 37 Cities of the U.S. and Canada*

Copies anything typed, written, printed, or drawn on ordinary translucent paper—in seconds.

Copyflex

CHARLES BRUNING COMPANY, INC., CHICAGO

In Canada: Charles Bruning Company (Canada) Ltd.
105 Church St., Toronto 1, Ontario

Charles Bruning Company, Inc., Dept. 41-DR
4700 Montrose Ave., Chicago 41, Illinois

Please send me information on the Copyflex process and machines.

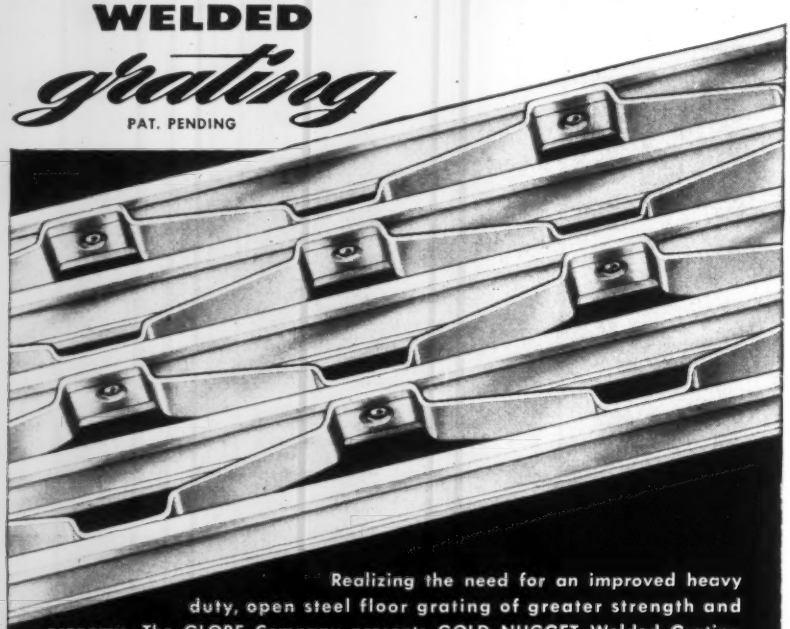
Name _____ **Title** _____

Company _____

Address _____

City _____ **County** _____ **State** _____

GOLD NUGGET®
WELDED grating
PAT. PENDING

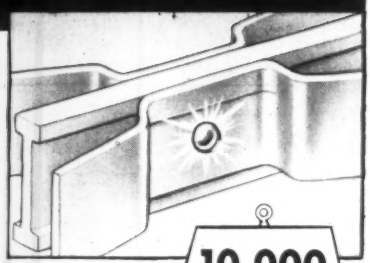


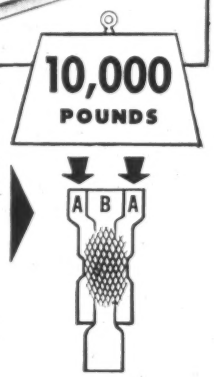
Realizing the need for an improved heavy duty, open steel floor grating of greater strength and economy, The GLOBE Company presents GOLD NUGGET Welded Grating — the first grating to take advantage of modern engineering design. As a result of this improved design, the GOLD NUGGET primary load bar provides 22% more strength with 14% less weight. The primary load bar is a miniature I-beam with all of the advantages of a true structural member.

GOLD NUGGET Welded Grating is recommended for power houses, loading docks, oil refineries, fire escapes, drain grates, plating rooms, filtration rooms and for all types of heavy duty platforms.

GOLD NUGGET

- ★ 3/8" projection weld nugget for greater rigidity and strength
- ★ vertical alignment of the main load bars assured
- ★ all bars are load carrying bars including secondary bars
- ★ anti-skid pattern





PROJECTION WELD

Each secondary load bar (A), as projected welded to the primary load bar (B) has a shear strength of 5,000 pounds per weld. There are 28 such projection welds to a square foot of grating. This means that GOLD NUGGET Welded Grating can sustain greater shock loads than other gratings.

For the complete details of this revolutionary new grating, write for new catalog today. Distributors in all principal cities. Consult the yellow pages in your phone book under "GRATING."

The GLOBE Company
MANUFACTURERS SINCE 1914
PRODUCTS DIVISION

SAFETY GRIP-STRUT GRATING • GOLD NUGGET WELDED GRATING • CABLE-STRUT AND GLOBETRAY CABLE RACEWAYS
4046 SOUTH PRINCETON AVENUE • CHICAGO 9, ILLINOIS

PATENTS AND PROGRESS
continued from page 54

Many improvement patents represent only slight variations on a basic theme.

As producing patentable inventions has become routine, with different firms contributing bits of the jigsaw puzzle, massive conflicts have become inevitable over claims to processes that everyone in an industry is working on. Interference proceedings in the Patent Office have been followed by titanic struggles in the courts. If it had been practical to define and isolate invention in an industrial age, these wasteful conflicts could have been eliminated. But who was to say whether the Dubbs cracking patent anticipated Burton's, or to what extent each infringed or was infringed by the Holmes-Manley, Tube and Tank, or other processes? Major oil companies involved in the unbelievably complicated litigation spent millions of dollars before they arrived at a comprehensive cross-licensing plan in 1931, with Universal Oil Products acting as a kind of community-supported research organization. Companies that were, in effect, pools to eliminate interminable and unsolvable patent conflicts were also set up in electronics, where RCA was trustee for GE, Westinghouse, and AT&T, and in the glass container industry, where Hartford-Empire maintained an uneasy truce. The patent system had, in these areas, been self-defeating. Only by emasculating it was private industry able to continue to make technical progress.

The Courts

The courts in the early 1930's began to react strongly against attempts by corporations to stake out broad patent claims on predictable and slight advances in the art. At about the same time, the Antitrust Division launched an attack on a wide front against the patent pools and single-firm patent factories that had appeared in the chemical, glass container, electric lamp, punch card machinery, and other industries.

A gulf has widened between the rigor of the standards employed by an overworked Patent Office in issuing patents and those used by the courts in reviewing claims of infringement. The rise in judicial suspicion of corporate patent claims can

be measured by a study of patent litigation in the U.S. Circuit Courts. In the years 1925–1929, only 33.4 per cent of litigated patents were held invalid. From 1950–1954, 60.7 per cent were held invalid. In the U.S. Supreme Court for the same years, the corresponding percentages were 29 and 100. What good was a patent if it could not be sustained? Evidently it was only a chance to litigate, as Walton Hamilton said.

Some courts explicitly held that the standards of patentability should be higher for inventions that emerged from a corporate laboratory than for those of private individuals. They refused to find that patents were infringed if the defendants could show they had been misused,

PATENT CHAMPIONS

Here are the 25 companies that acquired the largest number of patents in the seventeen years 1939 to 1955:

General Electric Co.	10,757
Amer. Telephone & Telegraph	8,539
Radio Corp. of America	7,894
Westinghouse Electric	7,567
E. I. du Pont de Nemours	6,338
Esso Standard Oil Co.	4,899
General Motors Corp.	4,041
Eastman Kodak Co.	3,784
Bendix Aviation Corp.	3,113
American Cyanamid Co.	2,872
United Shoe Machinery	2,461
Phillips Petroleum Co.	2,424
Shell Oil Co.	2,374
Westinghouse Air Brake	2,108
Sperry Rand Corp.	2,066
General Aniline & Film	1,919
The Dow Chemical Co.	1,884
Minneapolis-Honeywell	1,813
Monsanto Chemical Co.	1,747
Socony Mobil Oil Co., Inc.	1,697
Universal Oil Products Co.	1,665
Union Carbide and Carbon	1,645
B. F. Goodrich Co.	1,559
United States Rubber Co.	1,469
International Business Machines	1,410

or that the patentee did not intend to use them. Consequently the volume of patent litigation dropped off. GE's patent counsel, in an ingenious computation, has estimated that when a suit against an infringer has only a one-in-four chance of success, a defendant risks much less by fighting a suit than does the plaintiff, who must count on recovering four times his litigation costs in each successful suit. Such recoveries are unlikely; most victorious suits bring no recovery for past infringement. In the latest of such decisions, a Balti-

Beneficial Reports for 1956

Beneficial Finance SYSTEM

The 1,000th-Office Year

With the opening of an office in Garden Grove, California early in 1956, the Beneficial Finance System became the first 1,000-office organization in the consumer finance field.

In the Beneficial Finance System's 42-year history, 1956 was the best year ever . . . in number of families served . . . in area covered . . . in number of offices operated . . . and in net earnings.

Beneficial serves principally families by making loans in the small amounts they require and on repayment terms especially devised for them. In this way, a constructive service is rendered to people living in thousands of communities.

. . . a BENEFICIAL loan is for a beneficial purpose.

HIGHLIGHTS	1956	1955
Net Income	$ 18,685,686	$ 16,807,373
Net Income per Common Share	$1.91	$1.71
Cash Dividends paid per Common Share	$1.00	$1.00
Amount of Loans Made	$739,041,925	$632,491,082
Number of Loans Made	1,857,772	1,783,979
Instalment Notes Receivable —at year-end (after deducting Unearned Discount)	$442,283,634	$384,902,281
Number of Offices—at year-end	1,023	978

The information contained herein should be read in conjunction with the financial statements and notes appearing in the 1956 Annual Report to Stockholders. A Copy of the Report Will Be Furnished upon Request.

Beneficial Finance Co.

Beneficial Building, Wilmington, Del.

MORE THAN 1,000 OFFICES IN THE UNITED STATES, CANADA, HAWAII AND ALASKA

Rub—rap—tap—scrape—this smooth-surfaced shuffleboard disk is made to take the daily "grind" with a sturdy never-mind. Plenco-developed phenolic molding compounds build a protective, extra hardness into the surface areas of your product or part. More than skin-deep, this special density extends in depth, toughening the molding throughout. For hardness . . . for ease of fabrication . . . for economy of manufacture . . . count on Plenco.

P
PLENCO PHENOLICS

PLASTICS ENGINEERING COMPANY
Sheboygan, Wisconsin
Serving the plastics industry in the manufacture of high grade phenolic molding compounds, industrial resins and coating resins.

more District Court invalidated Goodrich's claim to the tubeless tire, saying the process was available to anyone.

Spectacular successes in antitrust cases against patent pools have likewise tended to diminish the value of patents. In the January 1956 settlement with AT&T and Western Electric, 8,600 patents were dedicated to the public, royalty-free. These were the patents that had been cross-licensed with GE, RCA, and Westinghouse. IBM in the same month agreed to make its existing patents on tabulating cards and machinery available, royalty-free. These were only the latest in a long series of successful suits against concentrations of patent control.

Research Expenditures Accelerate

Almost coincidentally with the downgrading of patents, industry has been increasing its research expenditures at an astounding rate. According to the National Science Foundation, private industry was spending, exclusive of Federal contracts, over $2 billion on research and development in 1953 the first year for which there is a wholly reliable figure. These expenditures were rising, on the average, by about 12 per cent a year, but the rate of growth for the large companies that accounted for a third of all research and development expenditures was much higher.

In 1941, the Federal Government was spending about $200 million for research. Today the Department of Defense, the Atomic Energy Commission, and other Governmental organizations are spending directly on research about $3.4 billion, including military pay and allowances and test production costs. A rough estimate for 1956 by the Attorney General shows a total of $7 billion for Federal, private, and non-profit research, including contracts with private industry. Research expenditures have been climbing at the rate of $500 million a year since 1953.

That these gigantic expenditures on research must have given rise to inventions in the economic sense is obvious. The application of atomic energy to peacetime uses is perhaps the best example. The successful extraction of shale oil, developed by the Bureau of Mines research in cooperation with the oil industry, may prove to be of lesser but still strategic importance. We are in no posi-

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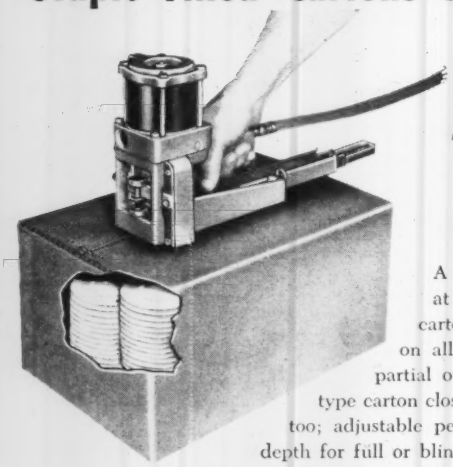

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tion to say what may come out of the military research because so much of it is secret, although the man-made earth satellite is undoubtedly a foretaste of things to come. Out of the military research in the last war came sonar and radar and many other advances, as well as the fundamental invention involved in producing atomic power.

It seems safe to conclude that under this forced draft, important inventions are being made more rapidly than ever before in history. It is true that there are sceptics who conclude, from analysis of total inputs and outputs of our economy, that the rate of growth has leveled off; they find the maximum technical change in the two periods 1874–1888 and 1919–1933. When the full potentialities of atomic power and problem-solving machines are utilized, however, it is difficult to believe that our rate of growth will not exceed that of these earlier periods.

Stagnation of Activity

What is most remarkable about the patent system in this era of unparalleled inventive activity is its relative, indeed its absolute, stagnation. When new patent applications are measured against the population, gross national product, research expenditures, or invention indexes, they exhibit a dismal slide. The number of patent applications per 10,000 population dropped from 8.6 in 1921 to 4.2 in 1951. More striking, from the economic standpoint, is the decline of invention patent applications in relation to each $100 million of GNP (in stable dollars). In the decade preceding the 1929 crash, the ratio was 65. In the comparable ten years after World War II, 1946–1955, the total number of patent applications was about 100,000 less, and the ratio fell to 26. A rise in the number of new applications in 1956, from 75,000 to 80,000, has been greeted by members of the patent bar as the turning of the tide, though it still leaves new applications below the 1931 level. A prominent sociologist has concluded that today perhaps 15 per cent of American inventions are patent-motivated.

Within the stagnation, however, there are eddies of activity. More and more, the taking out of patents has come to be concentrated in a few industries, notably chemicals, electronics, and drugs. These are popu-

larly supposed to be the dynamic industries, and perhaps they are, but it may well be that in other industries advances come too rapidly to be worth patenting. It must be remembered that the cost of the basic research and important advances in modern electronics have been and are paid for by the Government; that Flemming disdained to patent the basic step in antibiotics; and that chemical firms, following a live-and-let-live philosophy, rarely challenge each others' claims.

Business Interests

It is clear that the patent system has come pretty much, as far as its commercial usefulness is concerned, to be the preserve of the chemical and electrical industries. If the National Science Foundation sample is representative, the chemical firms account for close to 19 per cent of pending patents; petroleum products (now closely allied with chemicals), 12 per cent; electrical equipment firms, 13 per cent; and machinery (including a wide variety of firms, especially automotive parts manufacturers motivated to an indeterminate extent by defensive psychology), 17 per cent.

The decline in the number of patents could be partly accounted for, deductively, by the changed attitude of the courts and the Antitrust Divi-

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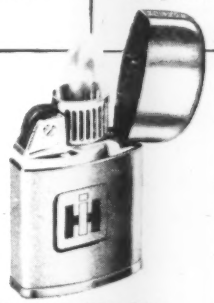

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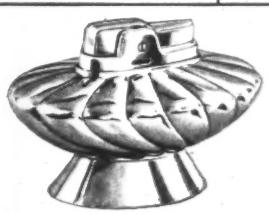

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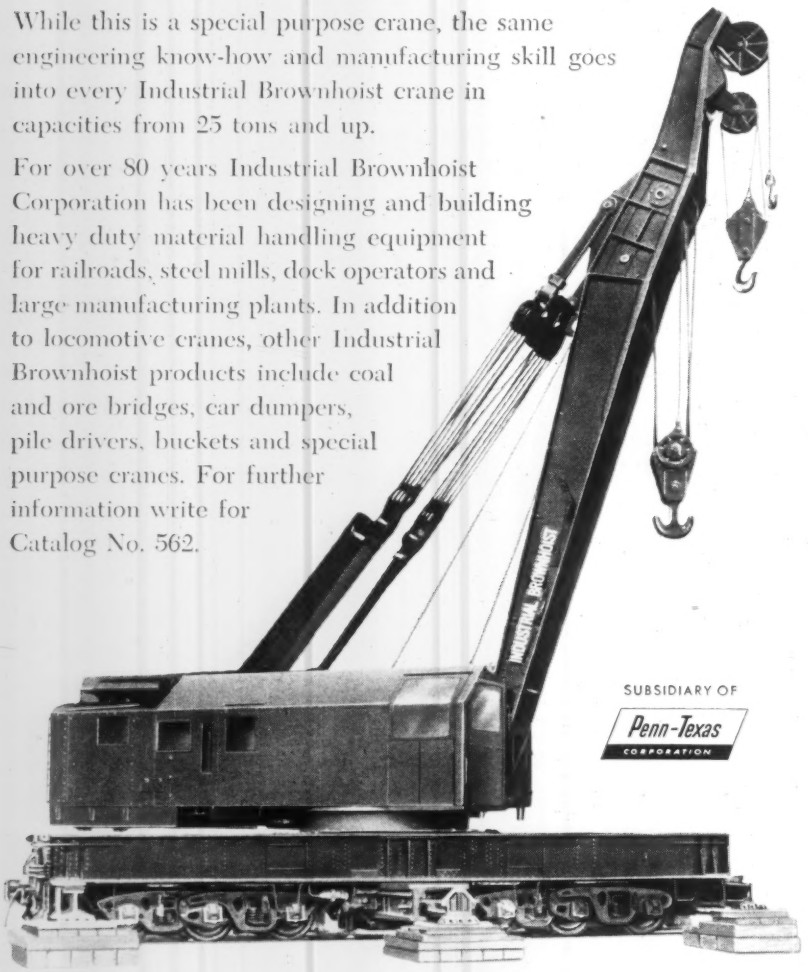

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sion. Increased complexity and cost of research per patent may also be responsible.

It was possible to draw on informal expressions of opinion by some 30 large and five small companies regarding the patent decline. These companies had been requested to comment on the relation between research and patenting; in so doing, they usually gave their views on causes of the prevailing trend in patent applications.

Company Attitudes

Many corporate managers remark that the only good patents belong to someone else. Some say that the research expenditures of their companies would continue unreduced in the absence of a patent system. Frequently they find a company's patents of an improvement nature are no sooner obtained than they become obsolete by reason of subsequent, and frequently patentable, improvements of a competitor. As pointed out earlier, GE's general patent counsel called attention to the riskiness of patent litigation. On the other hand, Westinghouse believes that engineers and scientists place tremendous emphasis on having their contributions recognized, through being awarded patents on their inventions.

Some firms, while admitting that they themselves had relatively little interest in patents, assumed that a high concern with patents was associated with a young and dynamic industry. It is clear, however, from other replies that old industries or firms are not necessarily unprogressive.

The president of a leading machine tool company stated that "[the hypothesis that a decline in patent activity is accompanied by increased emphasis on research] is certainly corroborated by our own experience. We seem to be putting increased effort on being fast on our feet with new developments, and decreased effort into attempting to protect what we develop. The technique, these days, seems to be toward self-protection by flooding on still further developments."

A manufacturer of heavy machinery felt that patent protection was of little value in a field where "we are searching and developing new ideas and new applications every day in the performance of our regular business activities."

A toy manufacturer also stressed the importance of fast development as against patents: "Now the trend is toward very close coordination between marketing and creative engineering so that new items when they are designed will stand a good chance of selling quickly and in quantity. The emphasis in our company is now far less on product research and much more on market research. I think you will find this typical of most consumer goods manufacturers. We would have been out of business long ago had we just sat around waiting for someone to dream up that so-called better mouse trap."

Two executives in a supposedly young and dynamic industry—aircraft—minimized the value of patents, one with regret, the other with indifference. The latter was frank to say that his principal reason for patenting was to protect himself against infringement suits.

Value Held High

The majority of the firms, however, were strongly of the opinion that, though it might no longer pay to take out improvement patents, though competitors might conceivably catch up while a patent was dawdling in the Patent Office, and though the courts were imposing higher standards of invention, the importance of patents had nevertheless not declined. The chief patent counsel for a large machinery company, drawing on experience with "several hundred corporations" had noticed no change during his years of practice. It seemed to him that small companies were more likely to be interested in patent protection for research and development than large. The director of research of a large primary metals firm had no doubts about the importance of the patent system. "Quite frankly, it is the only basis of which increasing expenditures for industrial research can be justified."

None of the firms had attempted to correlate its own research expenditures with patent applications. Almost without exception, proof of the importance of patents was supported by reference to statistics issued by the U.S. Patent Office.

Why Patents Are Concentrated

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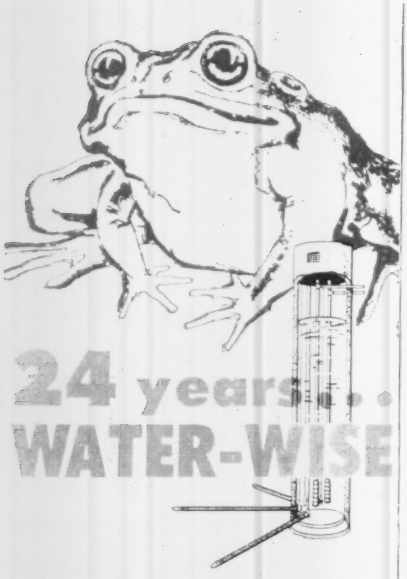
cause of the processes used, it is easy to classify and define the prior art. It is easy, therefore, for purposes of patenting and patent litigation, to define an "invention." Chemical firms, then, continue to rely heavily on the patent system, as do electrical, scientific instrument, and pharmaceutical firms, not only because they are "dynamic," but also because what they do is so easily patented.

Little Change Required

What patent law changes seem called for, in the light of these trends in research and invention? If our admittedly unrepresentative sample is at all trustworthy, business itself is not greatly interested in a change in the rules. The higher standards of invention enforced by the courts are not resented. Nor is there much hostility to antitrust action. One company, presently cited for violation of Section 7 of the Clayton Act, attached to its statement, with approval, a photostat of a speech by Congressman Cellar, defending the AT&T consent decree! Nevertheless, business satisfaction with the system does not relieve us of the responsibility for appraising the reforms that have been suggested:

1. Antitrust policy should not be changed. There is no evidence that the antitrust decrees have been followed by any decline in experimental activity or research expenditures. Thanks to the Antitrust Division, there is probably very little intentional misuse of patents today to control unpatented areas or scare off small competitors. Healthy competition is encouraged.

2. Small business should be treated equitably. The reforms in the patent system that do seem desirable are those that would aid the small business or individual inventor. When the bulk of Federal research funds is channeled to large corporations, thus enabling them to carry on the unprofitable preliminary work and to build up the "know-how" that has to precede arrival at a commercially successful invention, the small business man is left in an even more unfavorable position than he once occupied. Attorney General Brownell found that 15 companies accounted for 52 per cent of the patents resulting from Government contracts during the most recent five-year period. Some more equitable division of Federal research money could help small



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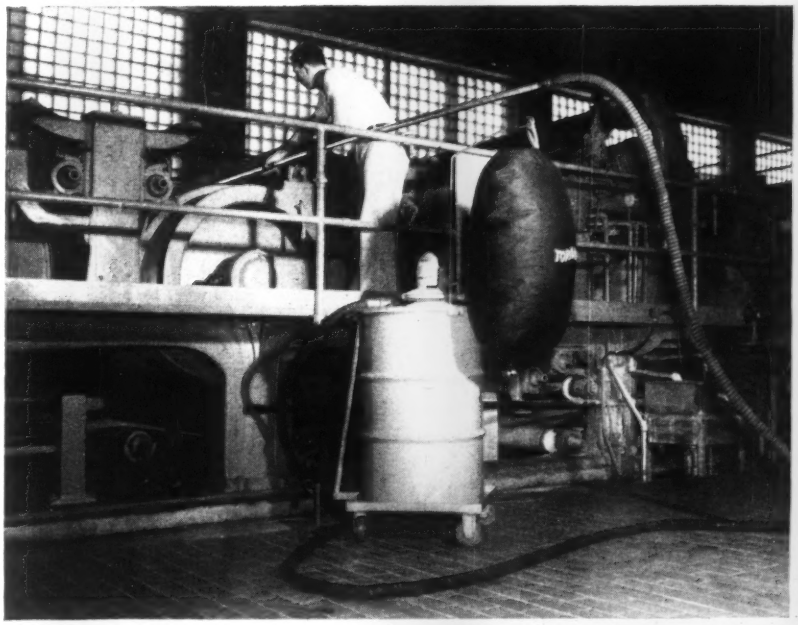
3. Delays in the Patent Office should be reduced. Certain administrative changes are called for. If Congress or the Budget Bureau could be induced to raise the Patent Office appropriation, delays in issuing patents could be cut down, and if patent examiners could devote more time to research on the "prior art" it might also be possible to raise the standards for patent issuance close to those of the courts. This would help small business by making it easier to challenge bigger competitors who might be otherwise inclined to steal its inventions.

How Much Change?

On the whole, little revision in the patent law itself seems called for at the present time. In spite of its antiquity it has proved sufficiently malleable in the hands of the judiciary to keep it serviceable and functioning in the public interest. The proposal to substitute technically trained arbiters for run-of-the-mill judges in trying patent cases has little to recommend it. Experts in electronics and petroleum chemistry have been notoriously unable to agree in the lengthy cases heard by the "untrained" bench. If the change resulted in relaxing the present standards of invention, it could only retard progress by permitting the reestablishment of patent empires. If it tightened standards, nobody would be interested in promoting it.

Compulsory licensing of all patents would undoubtedly reduce incentives to invent, and hurt small business more than large business. Present remedies assume that, where necessary, antitrust pressure will force licensing.

For better or for worse, we have moved into a stage of industrial history where the Government, rather than private enterprise, is seeing invention through the lengthy and unprofitable years between the idea and the commercial application. It is to be expected that invention and technical progress will be subject to a substantial speed-up; the lapse of time between conception and usable product will be small. This will require profound adjustments in our society; we must learn to be flexible, or suffer. However, it is not a problem the patent system has to solve.



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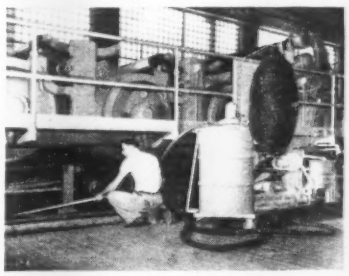

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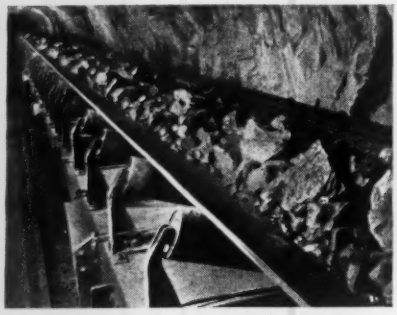

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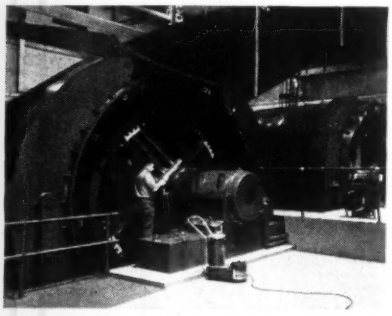

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Automation a big labor problem, say supervisors

CORPORATIONS preparing projects to allay production and office workers' concern about the growth of automation will do well to discuss the situation thoroughly with first-line supervisors and middle management people, a survey of supervisory opinion made by the National Management Association demonstrates.

Asked what effect they thought automation will have on management-labor relations, only 6 per cent of a representative sample answered that there would be "very few new problems." Some new problems requiring special attention," were foreseen by 42 per cent, and a majority —52 per cent—said they expected "many new problems, requiring careful management consideration."

The answers came from 404 of the NMA's 70,000 members, representing 387 companies in 34 states and Canada. The respondents' job titles closely corresponded with the breakdown of the organization's membership: 56 per cent first-line supervision, 34 per cent middle management and staff, 10 per cent higher-level management.

The survey, conducted by NMA Research Director Norman George, also gave a supervisor's-eye view of how well management in general is doing in its effort to upgrade supervisors and make them more a part of company management. The supervisor's pay and authority were reported as generally satisfactory, indicating management has gone far to liquidate two complaints of foremen that were considered No. 1 problems a decade or less ago.

Less satisfaction was expressed with the amount of training supervisors are given, but surprisingly, in view of the emphasis that has been put on two-way communications and delegation of authority in recent years, the areas in which the survey respondents felt that the greatest improvement could be made by their companies were in giving them "more and quicker information on policies and decisions," and in creating "better understanding of just what is expected of the supervisor," and "more participation [by supervisors] in management decisions."

The survey stated, "Below are listed six things that might be done to improve the supervisor's job. Rank them in what you think their order of importance is in accomplishing that objective." Here are their responses, the first number indicating the percentage of NMA men who ranked the item first on their list; the second number, the percentage who ranked it either first or second:

"More and quicker information from top management on policies and decisions"—36, 69.

"Better understanding of just what is expected of the supervisor"—26, 53.

"More participation by the supervisor in management decisions"—18, 36.

"More training"—15, 31.

"More authority"—2, 8.

"More pay"—3, 8.

Research Director George said the responses did not necessarily mean a lack of interest in pay, authority, or training (there appears to be some overlapping of content, in any case, between the "more authority" and "more participation in management decisions" items). Rather, he says, "The answers do reflect a deeper concern for inter-management relationships, at least for the present."

Answers to two other questions should be of interest to industrial executives. Asked, "In your observation, how well do top executives understand the problems of the super-

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YALE & TOWNE

88th Annual Report

HIGHLIGHTS OF REPORT TO STOCKHOLDERS

	1956	1955
NET SALES and other receipts	$123,725,731	$105,978,076
Total Costs and expenses	111,001,862	96,028,239
Net income before taxes on income	12,723,869	9,949,837
Provision for taxes on income	6,700,000	5,270,000
NET INCOME FOR YEAR	$ 6,023,869	$ 4,679,837
NET INCOME PER SHARE (Based on average number of shares outstanding)	$ 3.01	$ 2.82
Average number of shares outstanding	1,998,226	1,660,750
CASH DIVIDENDS declared	$ 2,884,460	$ 1,835,922
Income reinvested in the business	3,139,409	2,843,915
Payroll and other employee-benefits	42,968,826	36,936,294
TOTAL ASSETS	99,722,258	89,587,643
Current assets	71,244,969	62,920,623
Current liabilities	19,452,380	18,134,354
Long-term debt	18,168,707	19,178,291
Earnings reinvested in business, Dec. 31	30,565,571	28,206,162
STOCKHOLDERS' EQUITY	$ 61,261,171	$ 52,274,998

THE YALE & TOWNE MANUFACTURING COMPANY
Executive Offices: Chrysler Building, New York 17, U.S.A.

16 manufacturing plants and a Research Center in the United States, Canada, England and Germany. Licensed manufacturers in Australia, Belgium, France, Italy, Japan and Spain.

Sales representatives and Service Centers in principal cities of the world.

MANUFACTURER OF:
Industrial Fork Lift Trucks, Hoists, and Front-end Loaders
Locks, Door Closers, Pumps, and other Hardware Products
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CASH DIVIDENDS
paid by Yale & Towne every year since 1899

Next quarterly dividend, 37½¢ a share, is payable April 1 on stock of record on March 14, 1957

Find out how YOU can move things faster and cheaper with FARQUHAR GRAVITY CONVEYORS

- **Speedy handling. Not even a charge for power, because gravity does the work.**
- **Simple and easy to install because in most cases no engineering is required.**
- **Can be permanently installed or used as portable units to be moved from place to place.**
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Factory Branch: 618 W. Elm St., Chicago 10, Ill.

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This gravity conveyor is moving cartons of food but it might be YOUR merchandise in YOUR place of business.

Don't turn the page just because you are not in the milk business. Can't you visualize how a gravity conveyor like this could save men and money in YOUR store, warehouse or factory?

visor's job?" only 34 per cent considered that their top management men "understood most" problems; 59 per cent checked, "understand some but not all"; and 7 per cent had little esteem for their bosses' understanding. They checked the comment, "little executive understanding."

The personnel or industrial relations departments—often considered poachers on the supervisor's authority and responsibilities—fared much better in the questionnaire. "Generally speaking, how helpful do you think the personnel or industrial relations department of your company is to supervisors dealing with employee grievances and complaints?" To this, 54 per cent said, "Very helpful"; 29 per cent said, "Of some help"; and 17 per cent found them, "Not too helpful."

"The results of the first question [on executive understanding] seem consistent," George said, "with the rankings of the improvement factors mentioned earlier. The strong inclination—59 per cent—to take a middle-of-the-road attitude on the extent to which management is cognizant of supervisory problems indicates that there is a feeling that there is ample room for improvement of inter-management relationships.

"The fact that 83 per cent think the personnel or industrial relations departments are either of some help or of great help," he added, "seems a fairly substantial vote of confidence."

College education for supervisors received a fairly friendly vote, considering the comparatively small percentage of supervisors who have had that much schooling. There were 24 per cent who considered a college education "very important" for a supervisor, 75 per cent who thought it "helpful but not required," and

"Jenkins, I hope that last raise hasn't gone to your head."

only 24 per cent who dismissed it as of "no particular value."

Whether retirement should be compulsory at 65 found the respondents badly split: 22 per cent thought it should be an inviolable rule; 54 per cent favored it as a general rule, but with exceptions possible; and 24 per cent said it should not be required at all.

Cross-tabulation of the responses based on job title, geographic area, and size and nature of industry revealed no considerable difference in the pattern of attitudes, the research director said.

NMA Executive Vice President Marion N. Kershner, summing up the survey results, saw them as proof that supervisors are "keenly introspective about how their roles in management affairs are being accepted by top management."

3.5 million to get look at this annual report

When Chas. Pfizer & Co., Inc., sent out its annual report last month, it did not limit distribution to its 22,000 shareholders. It decided to pass the report out to more than 3.5 million newspaper readers, too, in the form of a 16-page illustrated supplement to the Sunday editions of three newspapers in the nation's three largest cities.

Embedded in the Sunday-magazine-size supplement are the usual annual-report statistics, but more evident is the slick-magazine treatment of news and features about Pfizer products and their impact on people, agriculture, and industry. Half of the offset magazine is in four colors, with illustrations by well-known artists.

The supplement was to go out with the March 31 issue of the *New York Times* and the April 14 issues of the *Chicago Tribune* and the *Los Angeles Times*.

New York Stock Exchange President Keith Funston is quoted in the report on the Exchange's philosophy on corporate reporting: "Full disclosure is an ingredient essential to the growth of a free economy."

Pfizer President John E. McKeen, while stating the outsize report was "prepared primarily to furnish stockholders with information on which they can intelligently exercise their judgment as investors," also mentions the broader purpose: to enable

"If Company X employing 300 workers located in Iowa,

Payroll Savings

alone would total

$265,363 Annually"

. . . from the FANTUS area

research study of IOWA

This Iowa "Industrial Resources" study lists the industries which can profit most from an Iowa location. It shows in detail how and why they can gain through an Iowa location. By industry classification the study makes a thorough evaluation of factors such as: proximity to consumer and industrial markets and their potentials; proximity to raw materials and parts supplies; quality, aptitude and supply of labor; wage rates; transportation, and power facilities.

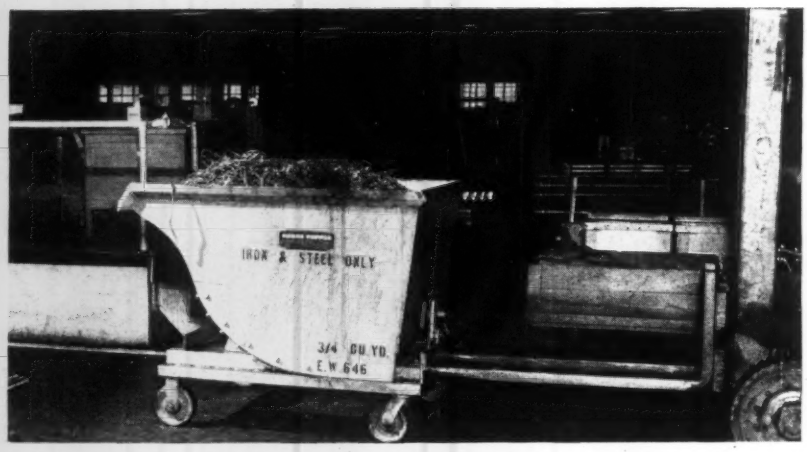
Among those industrial classifications with a unique 'economic fit' in Iowa are: chemical processing, packaging materials, non-durables, metal working and machinery, electrical and electronic equipment. Possible annual savings in payroll, shipping, and other types of costs amount to many thousands of dollars.

The Fantus study of Iowa digs deep, is objective, examines every aspect of every factor which would be involved in locating various types of manufacturing facilities in the state. Seldom, if ever, has a study so helpful to industrial planners been prepared.

This information will be made available to companies considering new plant location now or in the future. Contact the Iowa Development Commission.

IOWA DEVELOPMENT COMMISSION

365 Jewett Building • Des Moines 9, Iowa



Self-Dumping Hoppers permit fast scrap handling

The scrap disposal job is no headache for the Goss Printing Press Co., Chicago. They discovered a way to convert an inefficient salvage operation into a fast, economical scrap disposal procedure. Forty-one Roura Self-Dumping Hoppers, mounted on casters, are located throughout their plant serving as scrap containers. When the scrap-laden Hoppers are ready to be emptied, they are easily pushed into an aisle. A standard lift truck carries them to a waiting freight car. There, with a flip of a latch, each Hopper dumps itself . . . rights itself . . . locks itself . . . and is quickly returned to its station.

Versatile Roura Self-Dumping Hoppers are cutting costs throughout industry, handling hot or cold, wet or dry bulky materials.

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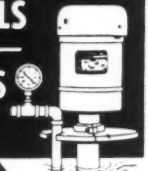

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These compact, dependable coolant pumps can give you up to 10 GPM *at* 65 ft. head. They provide abundant flow even through a maze of pipes.

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Pumps only or complete pumping units with tanks. Sold by leading Industrial Distributors everywhere. Graymills representatives near you are ready to help with special problems.

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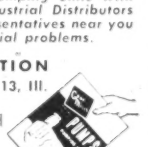
WRITE FOR BULLETIN 56JH



GRAYMILLS
Superflo COOLANT PUMPS AND UNITS

several million newspaper readers "to see just how an American corporation reports to its owners."

McKeen also stressed the report's value in personnel recruiting activities and in aiding the company's over-all public relations program. One interesting set of personnel figures: The company's outlay for group health and life insurance, pensions, and other benefits in 1956 was the equivalent of an extra paycheck of $22 weekly or $1,144 annually for each of its 10,000 employees, the majority of whom are also stockholders under a stock option plan.

The fact that company net earnings were up 19 per cent on a sales increase of 9 per cent, in a year when many companies earned less despite greater sales, puts no obstacles in the way of broadcasting the annual report far and wide.

Want to be an executive? A dollar does it

Executives and promoters of executive development programs may need soon to be looking around for a new prestige-word to distinguish themselves or their clientele from the mass of human beings, if folks don't quit belittling the word "executive."

The fact is that it's getting too easy to be an executive, if the Trade Bank and Trust Company of New York City has the distinguishing characteristics down right. One of a recent series of eye-catching newspaper advertisements for the bank says:

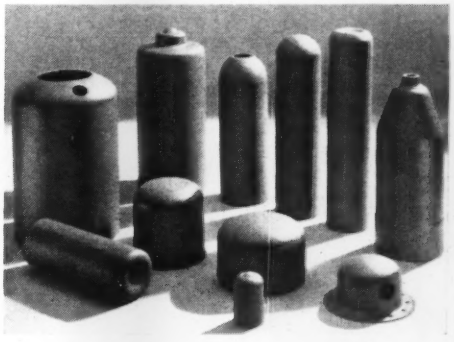
Act and feel like an executive. $1 opens a special checking account. No minimum balance required. Your name printed on every check.

If this is all that is required, promising management prospects may ask: why go to the Harvard Graduate School of Business, or enroll in a costly American Management Association seminar?

Public relations men have had their come-uppance, too, from another source. "Public relations people are just newspaper men with shoeshines," says Dean Sims, in a booklet on public relations written for industrial supervisors who are members of the National Management Association. Sims is no doubt trying to build up newspapermen in the public eye, for he used to be one himself, but now, presumably with both shoes shined, is the able manager of Public Relations for NMA.

Most modern industries shape up with industry's most modern shapes

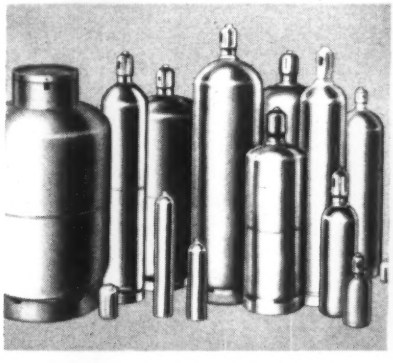
Towers for refineries and chemical plants such as this 42-ton, 133-foot stripper. Precision-welded towers and vessels are custom-made by the experienced engineers at the Downingtown Iron Works, Inc. Division, in Downingtown, Pennsylvania.



Deep drawn shapes for lighter, stronger products that reduce production time, lower unit costs for manufacturers of air conditioning, refrigeration, pneumatic, hydraulic and pressurized equipment.

Tank trucks for faster LP-gas distribution. Designed with twin tanks for bigger pay loads, better stability, the Hackney tank truck features practical styling, advanced piping and pumping engineering.

Stainless steel acid carboys that carry and stack easily. Hackney builds a complete line of crack-free drums and barrels widely used to cut shipping costs in the chemical, paint, food and other processing fields.



Compressed gas cylinders that help lower shipping costs of both high- and low-pressure gases. Built strong without excess weight, these smooth cylinders are available in many sizes to meet user requirements.

LP-gas systems for industry, home and the farm... featuring better design for easier filling. Hackney produces most types of LP-gas containers. Pressed Steel Tank Company, 1465 South 66th Street, Milwaukee 14, Wis.

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Hackney MILWAUKEE — DOWNINGTOWN IRON WORKS

Manufacturer of Hackney Containers for Gases, Liquids and Solids

Heat Transfer Equipment
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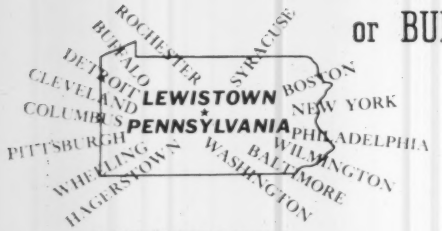
MOVING YOUR PLANT . . . or BUILDING A NEW ONE?



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- ☐ INDUSTRIAL SITES
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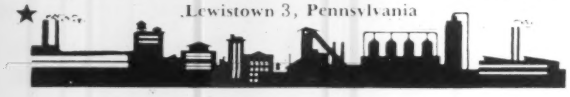
The FIRST NATIONAL BANK of Lewistown
Lewistown 3, Pennsylvania



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If credit limitations are keeping your distributors from carrying adequate stocks at peak seasons, let us show you the ***CONTROLLED CREDIT DISTRIBUTION*** Plan now used by many leading manufacturers It permits you to retain legal title to the merchandise, doubles the distributor's credit without additional risk to your company, acts as a collection control and supplies accurate 30-day inventory records.

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New York 4, New York

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CITY.....STATE.....

Clip and mail coupon for complete information.

EMPLOYEE COMMUNICATION

continued from page 45

ployees, irate over delays in adjustment of grievances, disturbed because they had been "taken for suckers" the year before, jolted the management with an emphatic "no" when the appeals for cooperation were turned on. The strike that followed, while of short duration, hit when it hurt.

A Short-Term View

One company found, to its delight and astonishment, that the letters were drawing out constructive comment and suggestions from employees. The management found itself with an amazing avenue to employee opinion, something which—if used intelligently and consistently—might readily ease the pressure of grievances. This company was building, without having realized it, that "bridge of understanding" too many concerns talk so glibly about. But the company let the medium die; once it had accomplished its purpose, it was jettisoned. And slowly but surely the grievances started to mount again. Productivity began to slide. Quality commenced to decline.

The error was not in poor communication, for the communication was good. The error lay in abandoning *good* communication once it had served its initial purpose.

"Silence Is Golden"

There is also the "no news is good news" school of thought. Its advocates take the stand that they will avoid trouble by saying nothing whatever. They sit grimly by while the grapevine whips rumors around their heads. They confront a union charge at the community level with "no comment." They seek to evade difficulty by ignoring it.

Adherents of the "silence is golden" principle, for example, keep financial information in the strong box so far as employees are concerned. They are compelled, of course, to issue it to stockholders. There is a curious belief in such concerns that, if the stockholder report isn't made available to employees in any form, there is no likelihood of the figures getting into the unfriendly hands of the union. The fact of the matter is that some employees are stockholders as well as members of the bargaining unit. Unions themselves are known to hold blocks of

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Commercial Credit reports

CONSOLIDATED net income of the finance companies, insurance companies and manufacturing companies from current operations, after payment of taxes, exceeded $26,400,000, the largest in COMMERCIAL CREDIT'S history. The volume of receivables acquired by the finance companies during 1956 aggregated $3,387,087,994, compared with $3,677,241,749 during 1955.

The outstanding receivables of the finance companies of $1,296,831,241 on December 31, 1956 were larger than for any previous comparable date. Gross written premiums of the insurance companies, prior to reinsurance, during 1956 were $33,106,362, compared with $47,056,317 for the previous year.

Net sales of the manufacturing companies during 1956 were $118,976,584, compared with $117,992,005 during 1955.

Net income per common share was $5.26 on the number of shares outstanding and was larger than for any previous year in the Company's history, and compares with $5.22 per share during 1955.

The book value of the common shares has increased $12.78 during the past five years, and on December 31, 1956 was $40.28. During this five year period the Company paid cash dividends of $61,758,361 on its common shares, and retained $58,796,311 in the business. Capital funds of the Company on December 31, 1956 exceeded $200,000,000 which, with $80,000,000 of subordinated unsecured notes (including $25,000,000 due 9/1/57) and $25,000,000 Junior subordinated notes, provided a base of credit for borrowing purposes of $305,000,000. The Company held reserves of $126,874,798 available for credit to future operations, expenses, credit losses and earnings.

We are grateful for the continued use of our facilities by manufacturers, wholesalers, retailers and customers, and the continued support of our stockholders, institutions and others who have provided our operating funds. We appreciate the intelligent cooperation and enthusiasm of the officers and employes in the handling of the Company's operations, which made 1956 the largest earnings year in the history of the Company. The outlook for 1957 for the Company and its subsidiaries appears satisfactory.

E. C. Wareheim, *Chairman of the Board*
A. E. Duncan, *Founder Chairman*
E. L. Grimes, *President*

Condensed consolidated balance sheet as of December 31, 1956 and 1955

ASSETS

	1956	1955
CASH AND MARKETABLE SECURITIES	$ 180 693 150	$ 190 532 645
RECEIVABLES:		
Motor and other retail	881 551 169	816 989 402
Motor and other wholesale	166 677 835	225 590 720
Direct loan receivables	68 955 708	49 628 455
Commercial and other receivables	181 132 189	156 450 891
	1 298 316 901	1 248 659 468
Less: unearned income	73 538 302	63 488 898
reserve for losses	19 659 794	16 385 073
Total receivables, net	1 205 118 805	1 168 785 497
OTHER CURRENT ASSETS	28 123 901	27 791 421
FIXED AND OTHER ASSETS	27 915 205	18 449 923
DEFERRED CHARGES*	9 917 441	7 995 844
	$1 451 768 502	$1 413 555 330

LIABILITIES

	1956	1955
NOTES PAYABLE, SHORT TERM	*$ 698 810 917	$ 790 319 000
ACCOUNTS PAYABLE AND ACCRUALS	48 939 709	49 047 254
U.S. AND CANADIAN INCOME TAXES	26 240 176	30 175 468
RESERVES	76 015 745	77 122 671
LONG-TERM NOTES	319 000 000	171 875 000
SUBORDINATED LONG-TERM NOTES	80 000 000	105 000 000
NET WORTH:		
Common stock	50 336 451	50 155 161
Capital surplus	28 898 274	28 515 984
Earned surplus	123 527 230	111 344 792
Total net worth	202 761 955	190 015 937
	$1 451 768 502	$1 413 555 330

*Includes $25,000,000 Unsecured Subordinated Notes due September 1, 1957.

A few facts as of December 31, 1956 and 1955

	1956	1955
Gross finance receivables acquired	$3 387 087 994	$3 677 241 749
Written insurance premiums, prior to reinsurance	33 106 362	47 056 317
Net sales manufacturing companies	118 976 584	117 992 005
Gross income—finance companies	$ 103 400 554	$ 85 124 940
Earned insurance premiums, etc.	36 943 437	38 663 845
Gross profit—manufacturing companies	16 878 758	17 958 054
Investment and sundry income	4 345 640	3 488 899
Gross income	161 568 389	145 235 738
Total expenses, insurance losses and reserves, etc.	72 898 339	66 116 446
Interest and discount charges	37 133 947	24 922 052

	1956	1955
Net income before U.S. and Canadian taxes	51 536 103	54 197 240
Less U.S. and Canadian taxes on income	25 057 432	28 012 310
Net income of		
Finance companies	16 569 774	15 628 251
Insurance companies	5 777 288	5 877 336
Manufacturing companies	4 131 609	4 679 343
Total credited to earned surplus	$26 478 671	$26 184 930
Common shares outstanding, end of period	5 033 645	5 015 516
Common stock per share		
Net income	$5.26	$5.22
U.S. and Canadian tax on income	4.98	5.58
Dividends	2.80	2.65
Book value	40.28	37.88
Interest and discount charges—times earned	2.38	3.17

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COMMERCIAL CREDIT COMPANY *Baltimore 2, Maryland*

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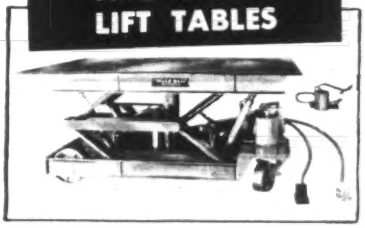

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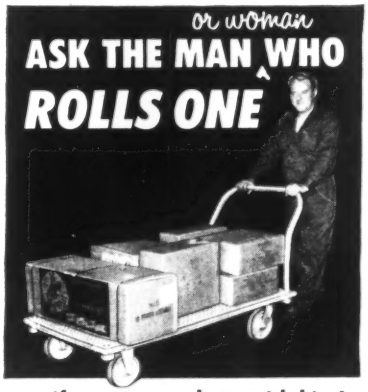
ASK THE MAN or WOMAN WHO ROLLS ONE



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Write today for Bulletin No. 151 to Magline Inc., Pinconning, Mich., P. O. Box 144.

MagLiner MAGNESIUM PLATFORM TRUCKS

Canadian Factory: Magline of Canada, Ltd., Renfrew, Ontario

stock in concerns whose employees they represent.

The ostrich principle may prevail also where new products are concerned. The word of the new product has already been passed along on the street corners, in the barber shops and the union hall, and in Dinny's Tap across from the plant. But the followers of the "silence is golden" principle believe they are sitting on a secret and will say nothing to anyone, particularly to employees.

It Can Be Expensive

But the principle, when followed as meticulously as some companies do follow it, is a costly little rack to hang a hat on. One company heard, but ignored, a local rumor that a merger was in the offing, that the plant was to be closed down following the consolidation. It had no information for the press, no word for the employees. There was no quieting rumor to offset the wild ones. The company awoke one morning to find itself faced with a mass exodus of its engineers, a team it had taken time and money to build. While the officials sat mum on the merger (which never materialized), a competitor's recruiting expert moved into the rumor-ridden community and nailed down the top engineering talent.

Another company permitted indictments of its benefits program to be spread around the plant. With bargaining only a few months away, the local union was able to lather up the membership to the extent that it had solid support for all its demands at the bargaining table. The rumors fanned into the community. The word was aired around that the company wasn't so good a place to work as the trusting neighbors had thought. Yet, by actual measurement, the benefits program at this company equalled or surpassed any program in a company of comparable size in the area. When the chips were down, management came off second at the bargaining table and won for itself a shabby reputation in the community.

So concerned was a third company over the distribution of its stockholder report that only top officials were given copies in the offices, *and they were asked to sign for them!* The company treasurer, it was authoritatively learned, said he must at all costs prevent any copy get-

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ting into the hands of the union. Yet before the distribution was effected in the offices, two complete copies were in the hands of the union and open pages had been spread on the bulletin board in the union hall. The union newspaper that same week carried the highlights of the report and its own somewhat prejudiced analysis.

The seasoned practitioners in employee communication have a maxim: When it's in print in any form, it's in the public domain.

"One-Way Street"

Sometimes management does all the talking and assigns the employees the role of auditors. What happens then is perhaps best illustrated by the plight of Company X, which became perturbed by the communication bogdown between management and the hourly employees. The mounting grievances, the occasional work stoppages, the annoying evidences of slowdowns—these were typical of the irritants. It occurred to one executive that the supervisors, referred to euphemistically in this plant as the "key men of management," might have the answer.

They had the answer all right. Encouraged to speak freely, the supervisors laid it on the table for management to see. And it boiled down essentially to this: Management had done all of the talking and none of the listening. It was presumed to be the job of supervision to get important information through to the plant people, but it wasn't being done. Why not? Simply because the supervisors themselves had never been invited to relay the questions and problems on their own minds or the views of those below them.

Don't Lose Your Friends

The supervisors found themselves ineffective with their own subordinates, and one by one they decided not to be the carriers of information. Mentally they were no longer on management's side; *they had allied themselves with the hourly-paid people as foes of management.*

A review of the supervisory meeting procedures provided some clues. These were cut-and-dried conferences at which management personnel acted as spokesmen, and supervisors acted as auditors. It was a perfect one-way street of communication. There was no effort on man-

agement's part to draw into the open the things *supervisors* wanted to discuss. There were no question-and-answer periods. A supervisor entered his conference, joined the moody captive audience, had his ear talked off, and walked out.

These alarming discoveries resulted in a complete overhaul of the supervisory communication system. The communication street was widened so that information could travel both ways. Supervisors were encouraged to bring questions to the meetings for solution and to suggest remedies for irritating situations. Management abdicated the chair and let the supervisors take over. The word got around the plant, because the hourly employees' gripes began to get attention.

Unhappy Ending

Not all one-way street situations have the same happy ending. In another company, neglect of the supervisor as a channel of communication has resulted in a downgrading of his standing with his own people. Instead of being regarded as a dependable *mouthpiece for management*, from whom the hourly employee can get the "score," he is considered (in the chilling argot of the shop) a "nitwit who doesn't know the time of day." The result is that supervisory jobs are going begging. The eligible hourly employee doesn't want the job, feels he can make more where he is, feels the heartaches and abuse of supervision aren't worth the glory the title reportedly bestows.

In the employee handbook of a third company there appears the statement: "If you have any questions regarding any of the material in this manual, ask your supervisor. He is your friend and will be glad to help you." By actual check in this concern, these are among the things the typical supervisor does not know: the major provisions of the union contract; how to answer the simplest questions regarding group insurance; how to handle a grievance. You can duplicate this high-powered ignorance all over the country.

"All-the-Eggs-in-One-Basket"

Company Q recently decided to broaden the editorial scope of its communication with employees. The decision was prompted, not by a recognition of communication needs, but by the sudden realization that

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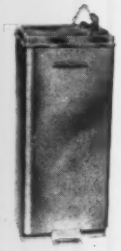

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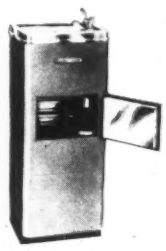
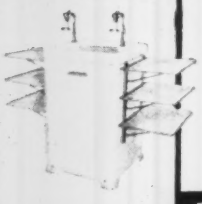


Compartment Type for Offices



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the company was spending upwards of $100,000 a year for its employee magazine and that perhaps a multiple-device program might serve its needs better. This program is still in the discussion stage, but the blueprints indicate that, for approximately the $100,000 the company now spends, it may readily have four good devices for communication with employees: (a) a quarterly rather than a monthly publication—smaller and less elaborate than the present monthly—for distribution to all employees in the multiple-plant concern; (b) a local monthly newsletter, cheaply reproduced on local plant equipment, for each of the several factory locations; (c) a modest bulletin board program originating at headquarters and supplemented with local plant material; and (d) an employee annual report. The editor of the employee magazine, the victim of the "all-the-eggs" doctrine, finds himself faced with the prospect of a bigger job with new challenges, and the company has four strings to its communications fiddle rather than one.

"Two Targets—One Bullet"

Too many companies build a horizontal rather than vertical program of communication. There are pitfalls in asking any one medium to carry too great a load.

One company decided last year to enlarge the readership of the employee magazine to include the stockholder group. This procedure involves two targets somewhat far apart; it is not easy to hit both with the same bullet.

The company unconsciously placed its editorial emphasis on the stockholder reader rather than on the employee reader. The publication grew plush and colorful. Its layouts became modern and dramatic.

The editor, delighted with the deeper significance of his editing chore, shifted his rhetorical gears from the simple to the complex. Suddenly, instead of producing a publication for the residents of Main Street, he found himself writing for the students of Wall Street. His basic readership—the plant employees—began to grow uncomfortable with the editor's awesome new English, to grow uneasy with words they didn't understand and with the economic profundities that went way over their heads. The employees said the heck with it. In a few months the

major part of the audience was gone or going. *Backfire No. 1.*

Meanwhile the company took a routine check of its stockholder readership, to see how large and impressive a segment the revised magazine had corralled. Results showed that about one stockholder in 100 was paying any attention to it. Most of the stockholders said bluntly that they would prefer to see the publication budget detoured into the dividend checks. *Backfire No. 2.*

Miscellaneous Bobbles

Communications people who strive to keep the industrial scene serene get the shivers at some additional bobbles of management. One of the older practices of some managements is the so-called "open door policy," enunciated when the boss, in a flush of nobility, decides to get close to his people. He may not have been close for years, and he seeks redemption.

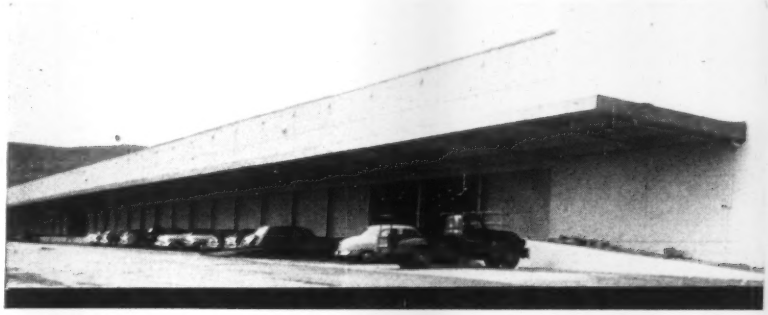
The typical open door policy creates havoc in most of the concerns where it is tried, because a company cannot build respect for the chain of command with one policy and tear it down with the next. It took one company nearly four years to develop a dependable relationship with supervisors, and it took the company president four minutes to destroy it. Seeking something to say in his monthly messageless message in the

THE AUTHORS

Robert Newcomb and Marg Sammons have pioneered in industrial editing. He originated and was the first editor of *Stet*, Champion Paper Company's publication for house organ editors. He organized the House Magazine Institute in New York City and later brought all existing editing groups together to form the National Council of Industrial Editors, now ICIE. For the past eight years he has taught industrial editing at the Medill School of Journalism, Northwestern University.

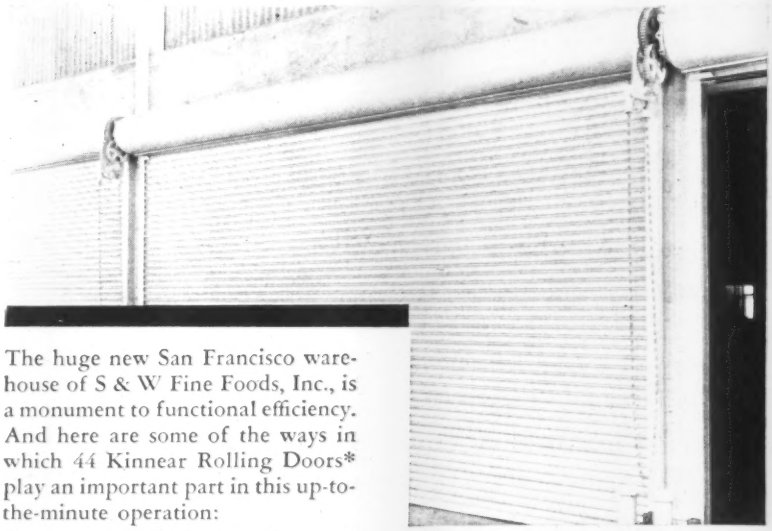
She is a former assistant editor of *Pure Oil News*, vice president of the Industrial Editors Association of Chicago and of the Employee Publications Section of the National Safety Council. She was the first secretary as well as a vice president of the present ICIE and the general chairman of that group's first national convention.

This man-and-wife partnership comprises the consulting firm of Newcomb and Sammons, Chicago. They own and publish *The Score*, monthly management report on developments and trends in employer-employee communication, and are the authors of *Speak Up, Management*, a MODERN INDUSTRY book on the techniques of communication with employees.



44 Kinnear Steel Rolling Doors

Speed Service at S&W Fine Foods —



The huge new San Francisco warehouse of S & W Fine Foods, Inc., is a monument to functional efficiency. And here are some of the ways in which 44 Kinnear Rolling Doors* play an important part in this up-to-the-minute operation:

They open *straight upward* . . . coil smoothly out of the way *above the opening* . . . clear the *entire* doorway quickly — from jamb to jamb and from floor to lintel.

They stay *out of reach* of damage by wind or vehicles.

All floor and wall areas around the doorway are *always* fully usable.

Ceiling space around openings remains clear at *all times*. There's never any interference with cranes, hoists, conveyors, lighting, or other overhead equipment. Goods can be stacked "clear to the rafters" inside or outside the opening.

The tough, flexible, all-steel curtain of interlocking slats assures *long* service, *low* maintenance costs, and *extra* protection against fire, wind, intrusion, and vandalism.

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Kinnear Rolling Doors are built any size, for old or new buildings, with motor or manual control. Write for information, or for recommendations on your door needs.

*33 Kinnear Steel Rolling Doors 18'9" wide by 10' high, ten doors 10' wide and 10' high, and one door 6' wide by 7' high.

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employee paper, he suddenly decided on an open door policy. He invited each and all to drop in and squawk. He didn't suggest that an employee see his supervisor first. He paid no heed to established procedures for the handling of grievances. He ignored the fact that an open door policy can, and usually does, pit man against man and group against group. Most of all, he failed to anticipate that he himself would weary of his own policy after a half dozen mournful interviews with employees.

Followers of the "Dollars for Loyalty" method of communication are a dime a dozen. These are the management people who, by self-indictment, are too busy to be bothered with communication devices, so they invite outsiders in to do their talking for them. Thus, instead of locally conceived material built for local interest, companies depend on mass syndicated posters and other literature, principally on economics. What the boss tells the help that day depends on what canned material Uncle Sam delivers in the mail.

You Must Be Believed

Insincere policies often result in poor communication; if the shop people don't believe what you say, your communications cannot but be poor.

One of the best examples of insincere policy is the "promotion from within" doctrine. This pronouncement, which generally appears in the employee handbook, is acceptable if true but quite often it isn't true. Last year a company announced the promotion of three men to the post of

No syndicated posters here! At Hamischfeger Corporation, Milwaukee, Wis., posters are locally created, deal exclusively with local events. Posters talk quality, competition, and productivity—in local terms.

superintendent: One had moved logically from the ranks through supervision to his new job. The other two—new to the company—made the grade through the happy circumstance of being related to members of upper management.

An essential ingredient of a smooth communication program is top-drawer approval. If you haven't got it, forget the whole thing. But the big man in the front office can't do the job alone. He needs help and sympathetic support from his own associates, and often he receives neither. Too frequently he meets a solid wall of resistance among his own confreres on the executive committee. It may not be open resistance, but it's mighty solid. The program fails because the president of the company hasn't been able first to "sell" those immediately around him.

The Dead Loss

What the skeptics require in order to approve *good* communication is to learn the cost of *poor* communication. Last year a company picked up the check for an unauthorized walkout, in order to save its own face for having failed to inform its supervisors of a policy shift. The bobble cost management, by its own admission, $12,820.

Last year a second company sharply improved its pension fund plan, failed to inform its employees sufficiently, and paid out an unanticipated $66,000 additional (according to the company's own estimate) because of a hard bargain driven by the union's alert representatives.

Last year a company bought a smaller concern, slowly began to move its own personnel into key positions, thereby elbowing aside those in the smaller company who felt they had earned promotion to these posts. Resignations followed; it was necessary to recruit quickly and inadequately, and a member of the parent company management put the cost at $75,000.

By the testimony of these three concerns it is clear that they shared a dead loss of more than $150,000. For $50,000, each could have had an effective employee communications program, geared to meet the crisis each faced. Instead the money went down the drain.

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Briefly, Iridite is the tradename for a specialized line of chromate conversion finishes. They are generally applied by dip, some by brush or spray, at or near room temperature, with automatic equipment or manual finishing facilities. During application, a chemical reaction occurs that produces a thin (.00002″ max.) gel-like, complex chromate film of a nonporous nature on the surface of the metal. This film is an integral part of the metal itself, thus cannot flake, chip or peel. No special equipment, exhaust systems or specially trained personnel are required.

If your company is manufacturing or buying parts or complete assemblies made from or plated with any of the more common non-ferrous metals—zinc, cadmium, aluminum, magnesium, silver, copper, brass or bronze—you've probably already run up against the question of finishing these surfaces with a chromate conversion coating. These coatings are used to protect against corrosion, or to provide a base for paint or to provide a decorative finish for sales appeal or shelf life. Since chromate conversion coatings represent a relatively new means of obtaining these finishes, this digest of facts to consider may be of value to you.

1. THE COATINGS THEMSELVES. There are many brands on the market. All are similar in many ways. Each, of course, offers its own specific advantages and these may relate to operating techniques, performance under actual use conditions, cost, availability, etc. Naturally, you'll want to choose a coating that is widely known and accepted under both military and civilian specifications.

2. THE COMPANY BEHIND THE PRODUCT. Is it a reliable, established organization? Does it offer experienced technical service, both from the field-engineering organization as well as the home office and laboratories? The man who sells and services your installation should be thoroughly familiar with not only chromate conversion coatings and their applications, but also with the characteristics and performance of related finishing operations such as precleaning, electroplating, painting, etc. This is most important since all steps of the finishing cycle must be functioning properly for the satisfactory performance of the ultimate finish produced.

3. AVAILABILITY OF THE PRODUCT. Ideally, of course, the material should be readily available to you from nearby warehouses to avoid time loss in long distance shipping and to provide emergency service, should the need arise.

4. COST. Naturally, the initial price of the material is important to you. However, just as you consider ultimate cost when you are buying mechanical equipment, ultimate cost must be considered for these finishing chemicals. So, it will pay you to investigate consumption costs, labor costs and the other factors which go into the determination of ultimate cost. Further, cost alone gives no indication of product performance, so careful attention must be given to the purpose the finish must serve and the value that finish will add to your product.

5. FACILITIES FOR RESEARCH AND DEVELOPMENT. Perhaps the existing types of chromate conversion coatings do not include a compound that will accomplish exactly what you wish. Then, it is important to deal with a supplier who has adequate research and development facilities available to work with you to produce a material to meet your needs. Naturally, such a project is seldom completed overnight. But, with complete cooperation and confidence from both you and your supplier, chances are a satisfactory program can be completed.

These are the concepts of sales and service on which we, Allied Research Products, Incorporated, have developed and marketed the line of Iridite chromate conversion coatings . . . superior product performance, complete sales and technical service, easy product availability, economical cost, extensive research and development facilities. No doubt you are familiar with our line and have seen this trademark—

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For complete information on Iridite chromate conversion coatings, write today for your free copy of our technical data file. Or, for immediate advice, call in your Allied Field Engineer. He's listed under "Plating Supplies" in your classified telephone book.

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New components, materials, design ideas put Spring in production, sales

Babies that spark new products

A baby boom is under way—in the electrical battery field. New mite-sized units, no bigger than a tube cap, promise to extend the benefits of electricity and miniaturization to a host of products. Some of the new batteries are fairly conventional in design, while others employ new principles like radioisotope activation; but all are tiny, light in weight, and apparently suitable for commercial use.

Not surprisingly, research on these new miniature devices is being spurred by makers of wrist watches, hearing aids, military instruments, and other products in which small size and long life are qualities that can command a premium in price.

For instance, Sonotone Corporation is using a miniaturized mercury-type battery (a zinc-mercuric oxide cell) in its new all-in-the-ear hearing aid. The cell itself weighs less than two grams; the entire hearing aid barely half an ounce.

Another baby battery is a carbon-zinc cell, developed by National Carbon Company for the new Hamilton self-powered electric wrist watch. This cell, too, is basically conventional in construction, though it weighs but 1/20 of an ounce (about a gram and a half).

The "atomic" (radioisotope-activated) batteries, on the other hand, utilize new materials—phosphors, semiconductors, and radioactive isotopes—and new principles of operation. Several different types have already been developed, among them, the batteries used in the Paterson-Moos power packs pictured below.

In most "atomic" batteries introduced so far, a radioisotope is used to activate a semiconductor, stimulating the flow of current.

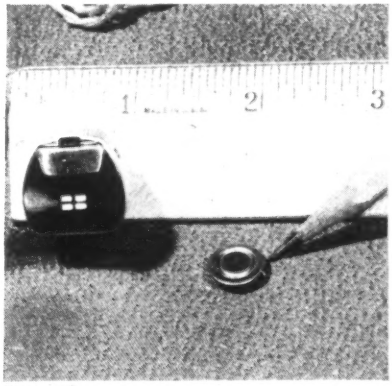
The new button-sized unit pictured below, developed for Elgin National Watch Company by Walter Kidde Nuclear Laboratories, differs from these in that the isotope's radiation does not strike the semiconductor directly. Instead, the isotope is used to activate a phosphor which, in turn, gives off light that plays on the semiconducting material. This way, Kidde says, the danger of radiation damage to the semiconductor is minimized, and the battery's life is lengthened considerably.

The Kidde battery is not yet in production. Right now, it would be pretty expensive because the isotope it uses (Promethium 147) is costly. However, new AEC isotope-processing facilities, scheduled for completion this year, promise to bring the isotope's price way down and then, Kidde says, the complete battery should cost less than $5. Not cheap, of course, but batteries of this type should last a long time—several years at least.

Long life is, as a matter of fact, one of the big attractions of all these new devices; and this, coupled with small size and adequate output, entitles them to serious consideration.

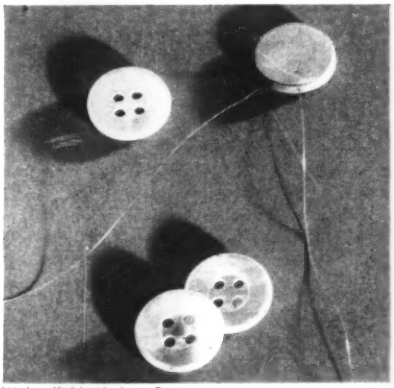
Materials in brief

Another "new metal" is looming on the structural horizon. Its name is familiar, but, until recently, it was used mainly as an alloying element. In pure form, it was, to say the least, hard to handle. Then it turned out to have unusual nuclear properties, and researchers set out to tame it. The



Sonotone Corp.

Hearing aid battery weighs less than two grams, but has surprisingly high capacity.

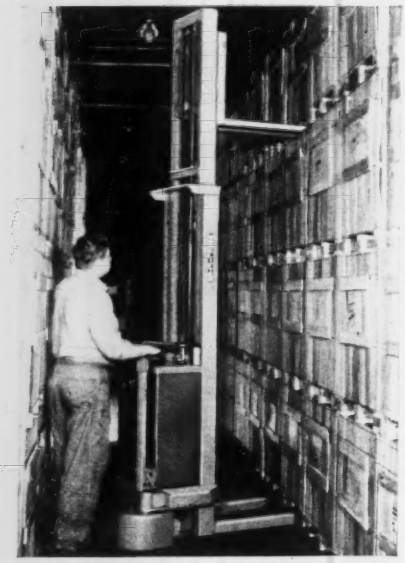


Walter Kidde Nuclear Corp.

Wrist watch battery is designed to use a radioactive isotope as its power source.

Paterson-Moos Division, Universal Winding Corp.

Power package for airborne instruments uses atomic batteries of still another type.



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job is not an easy one. But, in addition to its nuclear properties, this metal, beryllium, is nearly as strong as steel yet weighs barely a fifth as much. No wonder General Clyde H. Mitchell of the Air Material Command says it "offers considerable promise for the future in aircraft and missile structural applications . . . [if] its third-dimensional brittleness can be overcome."

That's still a big "if," of course, but, with several government agencies pushing research on it, there's a real chance for success.

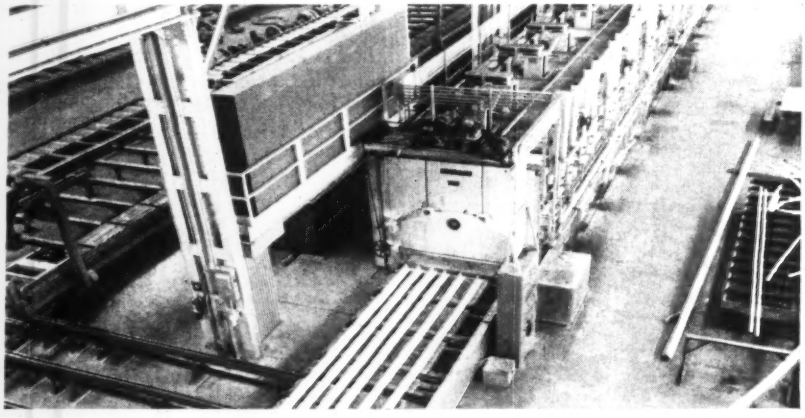
Elevated temperature drawing under closely controlled conditions is the key to the unusual qualities of its *Fatigue-proof* hot-finished steel bars, La Salle Steel Company now reports.

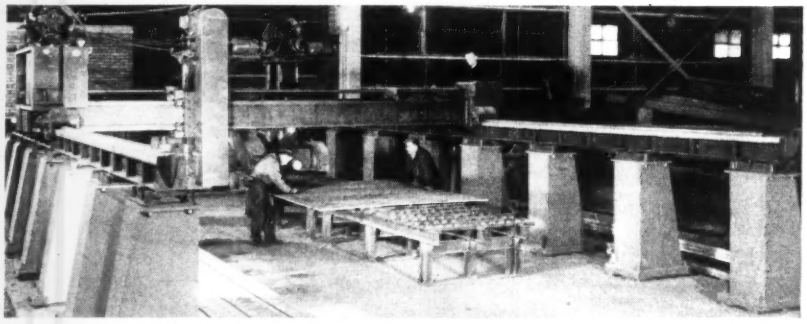
Introduced about a year ago, the *Fatigue-proof* "e.t.d." steels are said to "offer the strength, dimensional accuracy, surface finish, and machinability normally associated with heat-treated cold-finished bars." This, LaSalle points out, can permit elimination of heat treatment, and its subsequent operations, reduce finishing costs, and may even lessen dependence on strategically scarce alloying elements.

The bar stock, now supplied in rounds ½ to 2½ inches in diameter, has a guaranteed Rockwell C hardness of 30, a tensile strength of 140,000 p.s.i., and a yield strength of 125,000.

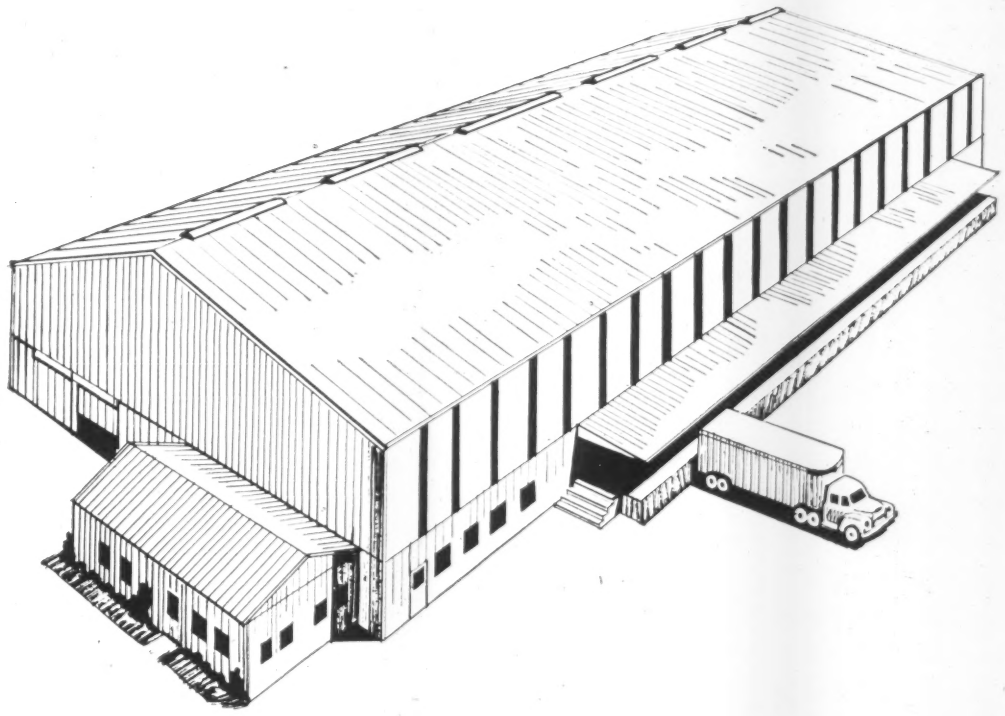
Expanded tantalum sheet, in thicknesses from 0.003 to 0.075 inch and widths to 54 inches, can now be had from Fansteel Metallurgical Corporation. Suggested uses: anode bas-

The better to serve you, sir





Good news for metal fabricators are the new facilities being installed at both mills and warehouses for supplying bigger and better shapes and forms. Westinghouse-built roller hearth furnace at Kaiser Aluminum's Halethorp, Md., plant is equipped to handle 100-foot-long extrusions, reduces processing time, improves mechanical properties. New disc-cutting unit installed in Ryerson steel distribution plant holds close tolerances in cutting stainless steel plates up to 12 by 25 feet in size, turns them out with smooth, square edges. Equipment can also be used for aluminum and carbon steel.



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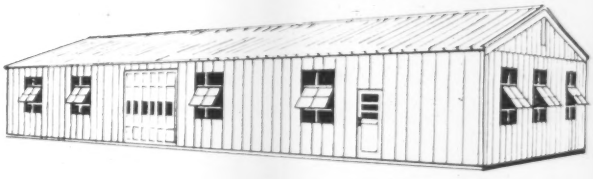

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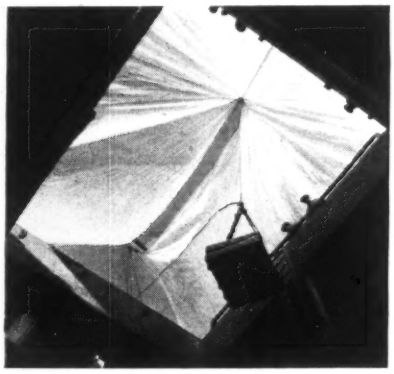
kets in electroplating baths, packing supports in fractionation towers, backing for filter cloths, and catalyst carriers. The tantalum mesh could, for instance, be coated with platinum and used as a catalyst screen—thus saving platinum as well as promoting efficiency of the catalytic reaction.

Titanium and copper strip are being held to unusually fine dimensions by American Silver Company. Titanium as thin as 0.001 inch, one-eighth to six inches wide, is being offered with a tolerance of plus or minus one ten-thousandth for use in honeycomb structures. Copper may be obtained in commercial quantities at 0.00025 inch, and in pilot amounts down to 0.00015 inch in thickness.

New cleaning process for copper uses a water solution of ammonium persulfate instead of the conventional acid pickle. According to Becco Chemical Division of Food Machinery Company, which developed the process, cleaning can be done in half a minute at room temperature, and "surface films are completely removed, a slight etch is imparted to the surface, and re-tarnishing is considerably retarded." Adhesion of coatings to treated surfaces is also excellent, Becco reports. —A. R. G.

more news on page 122

More light on the job



This strong, weather-resistant cover keeps rain out, but lets light in. It's made by Herculite Protective Fabrics of translucent vinyl film reinforced with Celanese *Fortisan* yarn. Easy to handle because it weighs only half as much as conventional tarpaulins, the fabric stores compactly, won't rot or mildew. Here made into a hatch cover, the fabric should prove useful for such industrial jobs as cleaning processing equipment that is set up outside the plant.

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NEW DESIGNS

Eight ways to

FLEXIBLE MAGNETS can mean greater design freedom. Polymer Corporation of Pennsylvania makes these in rod and tape form by incorporating iron powder in a special binder. (The tape is the same material as the rod—not a powder deposited on a tape backing.) Polymer Corp. says the magnets can stand temperatures to 400° F, and exhibit constant permeability over a wide range of frequencies (up to about 3,000 mc).

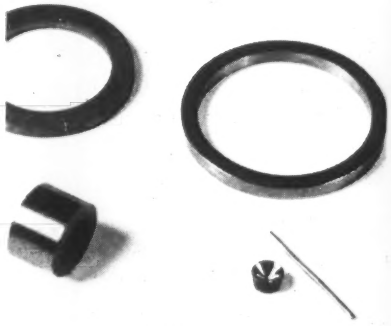
GASKETING MATERIAL is made of cork granules and wood fibers bound together by Goodyear *Chemigum* nitrile rubber latex. It's said to have good compressive and tear strength, may be used to cushion rough flange surfaces and sharp-edged housings, may eliminate the need for machining, permit use of fewer bolts. F. D. Farnum Company, Chicago, supplies the material, called *Kaokork*, in sheets and cut shapes.

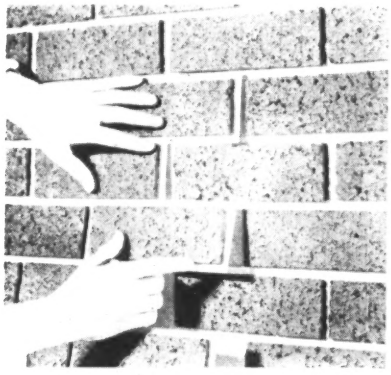
ASSEMBLIES are cheaper than unitized parts, in some cases at least. There are exceptions to every design rule—even the one that combined parts are cheaper (see opposite page). Armco Steel reports that the oil burner vaporizer cup (right), made of punched, drawn, and machined stainless steel parts, costs 60 cents less than the cast iron unit (left) it replaces; and it weighs but a tenth as much.

TRANSPARENT MODEL helps Westinghouse study stresses in shell for nuclear reactor. Special photoelastic resin is used in model's construction. After the model is built, but before it is cured, it is placed under stresses similar to those that will be encountered by the full-scale metal shell. Then curing "freezes" the stress pattern in place. It becomes visible when the sections are placed in polarized light.

improve your products

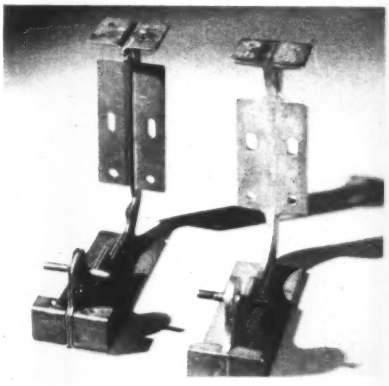
PLATINUM BONDED TUNGSTEN CARBIDE can now be had for parts that must stand unusually tough abrasive and corrosive conditions. Kennemetal, Inc., the supplier, says the material has a "corrosion resistance equaling that of the noble metals," though it's less expensive and more resistant to wear. Applications include seal rings and metering orifices for equipment handling such materials as fuming nitric acid.

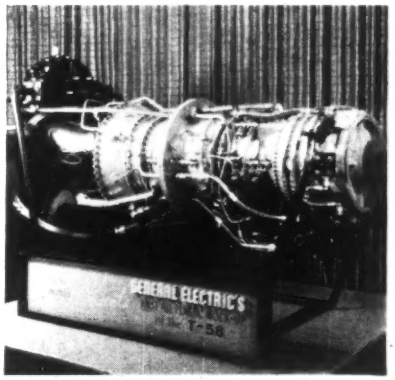




NEW WALL COVERING also has cork as its basic material (note gaskets on opposite page), is said to feel as well as look like brick. It's made in interlocking panels that can be cut with a razor, attached to walls with standard adhesives. Corkbrik Company, Ridgefield Park, N.J., supplies the material in several colors, claims it is fire-resistant, will provide both acoustical and thermal insulation.

COMBINING SEPARATE PARTS into a single casting is a well-recognized way to cut production costs, though there are exceptions, as the photograph on the opposite page shows. The American Die Casting Institute says this fluorescent-lighting fixture bracket was a lot more expensive in both labor and materials when the separate parts (left) were used. Now, it's designed for production as an aluminum die casting.





PLASTIC MOCK-UP gives General Electric and its customers a preview of new aircraft engine, makes it possible to plan clearances and connections long before the first production model rolls off the assembly line. Atkins & Merrill, Inc. built the model of fiber-reinforced epoxy resin, says new molding and fabricating techniques make this type of construction faster and less costly than wood and metal.

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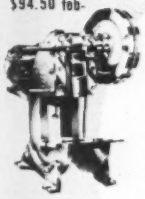

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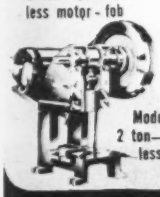

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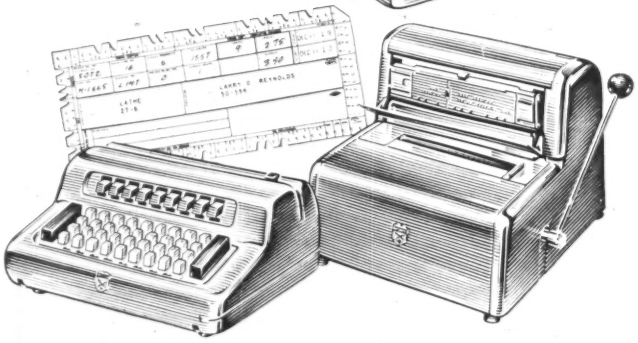

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The Kreuger crash

THE INCREDIBLE IVAR KREUGER *by Allen Churchill. Rinehart & Co., Inc., 232 Madison Ave., New York, 301 pages, $3.95.*

When Ivar Kreuger shot himself on March 12, 1932, his death shook the stock markets of the world. The Swedish "Match King," whom one newspaper had termed "a Puritan of finance," whose companies had continued to pay pre-1929 dividends during the darkest days of the great depression, turned out to be a gigantic fraud. His vast financial empire had been bolstered by forgery; liabilities were more than $1 billion; American investors of all sizes were among those who suffered.

This biography attempts less to explore what Kreuger actually did—that was disclosed by subsequent investigations—than to examine his

One of Kreuger's last great moments came in 1930 when Syracuse University made him a Doctor of Business Administration.

character and motives. In this the author has not been entirely successful, for the very good reason that Kreuger had no confidants, apparently few ordinary human emotions at all.

The biggest mystery is how this man, who was known to his schoolmates as "The Sneak," later assumed an aspect of such probity that top American business men were willing to accept his claims without investigation. Partly, of course, he traded on the fact that nothing succeeds like success. The highly respected American auditors who once went over his records, the author reports, were puzzled by absence of vouchers, statements, and agreements, but eventually decided that there could be nothing wrong with a man who had won such confidence from top financiers.

The Kreuger crash now seems as distant as the Mississippi Bubble. Still, the too gullible may profit from reading this book, and others will find it interesting.

How to be a forecaster

FORECASTING BUSINESS TRENDS *by Leonard S. Silk and M. Louise Curley, McGraw-Hill Book Co., Inc., 330 West 42nd St., New York, 157 pages, $15 ($12.50 for subscribers to McGraw-Hill Consultant Reports).*

BUSINESS FORECASTING IN PRACTICE: PRINCIPLES AND CASES, *edited by Adolph G. Abramson and Russell H. Mack. John Wiley & Sons, Inc., 440 Fourth Ave., New York, 275 pages, $6.50.*

These two books cover much the same ground: the theories professional economic forecasters follow in working out their predictions and the data they use.

Forecasting Business Trends, one of a series of McGraw-Hill "Consultant Reports," presupposes no previous knowledge on the reader's part. It explains the subject from the ground up and lists all the sources of statistics, their publishers, and prices. It is an excellent book for the business executive who would like to know what the science of business forecasting is all about, and perhaps try his own hand at it.

Business Forecasting in Practice is made up of papers by a number of authors, most of whom are serving as economists for large companies. Although it is a somewhat more

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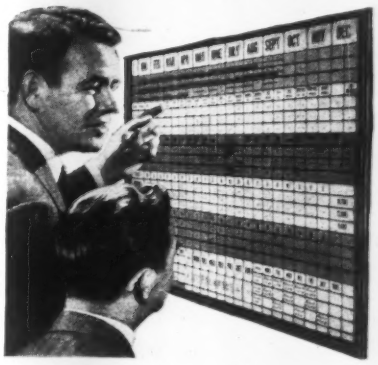

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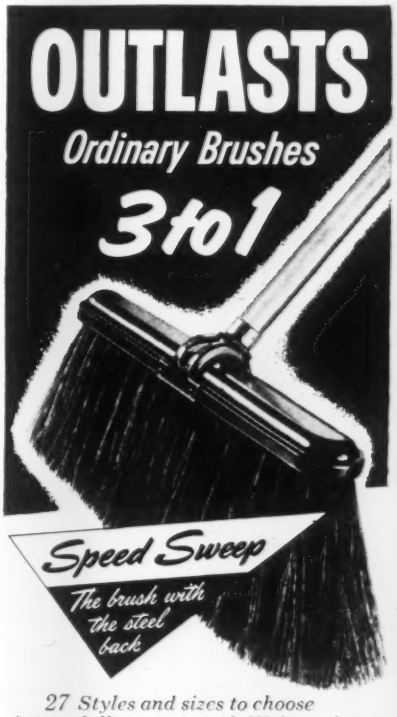

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technical exposition, the non-technical business man should find much of the material interesting, especially the case studies of actual forecasts.

How train an administrator?

FACTORS IN EFFECTIVE ADMINISTRATION *by Charles E. Summer, Jr. Graduate School of Business, Columbia University, New York 27, 286 pages, $3.25.*

Administration and related subjects are now a well-recognized part of college curricula. This book, based on a study conducted with funds from the Samuel Bronfman Foundation, presents the views of the educators on the abilities, attitudes, and knowledge needed for success in the field. More than half of it is devoted to a listing of representative courses with detailed descriptions of content and aims supplied by the teachers. It is interesting to note that there is little unanimity among the educators except on the opinion that no formula for solving management problems exists.

Getting the new graduates

CAREER: THE ANNUAL GUIDE TO BUSINESS OPPORTUNITIES. *Careers Incorporated, 15 West 45th St., New York 36, 256 pages, $1.95.*

Designed as a guide for the job-seeking senior, this seventh edition shows how strenuously companies are competing with each other for new college graduates. Nearly 150 concerns have taken space to promise interesting work, liberal salaries and benefits, promotion from within, management training, for the young and inexperienced.

Facts and figures

STATISTICS FOR MANAGEMENT *by B. J. Mandel. Dangary Publishing Co., 2807 West Belvedere Ave., Baltimore 15, Md., 408 pages, $6.*

Statistics are used so much today—in business, in government, even in private argument—that a rounded education requires at least an elementary training in the field. As one enthusiastic statistician, quoted in this book, observed: "The statistical method is more than an array of techniques. . . [It] is a mode of thought; it is sharpened thinking; it is power."

Mr. Mandel has provided an excellent introduction to the subject, complete with problems and answers. Those who merely want to sharpen their thinking and acquire some of the power—or protect themselves

against the misuse of it by others—will find his book sufficient for their needs. Those who want to go more deeply into the subject will find it a helpful beginning text.

For the salesman

TESTED WAYS TO CLOSE THE SALE *by Elmer Wheeler. Harper & Brothers, 49 East 33rd St., New York, 226 pages, $3.95.*

Elmer Wheeler, the author of a number of books on salesmanship, makes a practice of setting down "tested sentences"—the exact words that have been found most effective in the selling field. His book includes many of them, plus information on helpful approaches and techniques drawn from his own and others' experience.

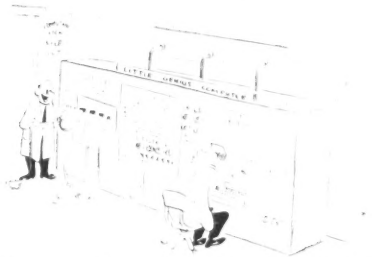
SECRETS OF SUCCESSFUL SELLING *edited by John D. Murphy. Prentice-Hall, Inc., Englewood Cliffs, N.J., 238 pages, $4.95.*

Billed by the publishers as "The Best of the Best," this book offers the selling "secrets" of five top authorities in the field: Charles B. Roth, sales counselor to leading corporations; Frank Bettger, author of *How I Raised Myself from Failure to Success in Selling;* Earl Prevette who sold more than $10 million worth of insurance policies over the telephone; Bert H. Schlain, author of *Big League Salesmanship;* and Elmer Wheeler.

Pushing personality

BUSINESS SUCCESS HANDBOOK *by Harry Simmons. Harper & Brothers, 49 East 33rd St., New York, 322 pages, $4.95.*

Some sociologists may deplore the plight of the rootless white collar worker, forever condemned to "sell" his "personality," but there are those who accept the situation joyfully, and Mr. Simmons is one of them. His book is almost entirely concerned with development of a personality that will prove acceptable to everyone; even the "inner spirit," it appears, should be cultivated to that end.



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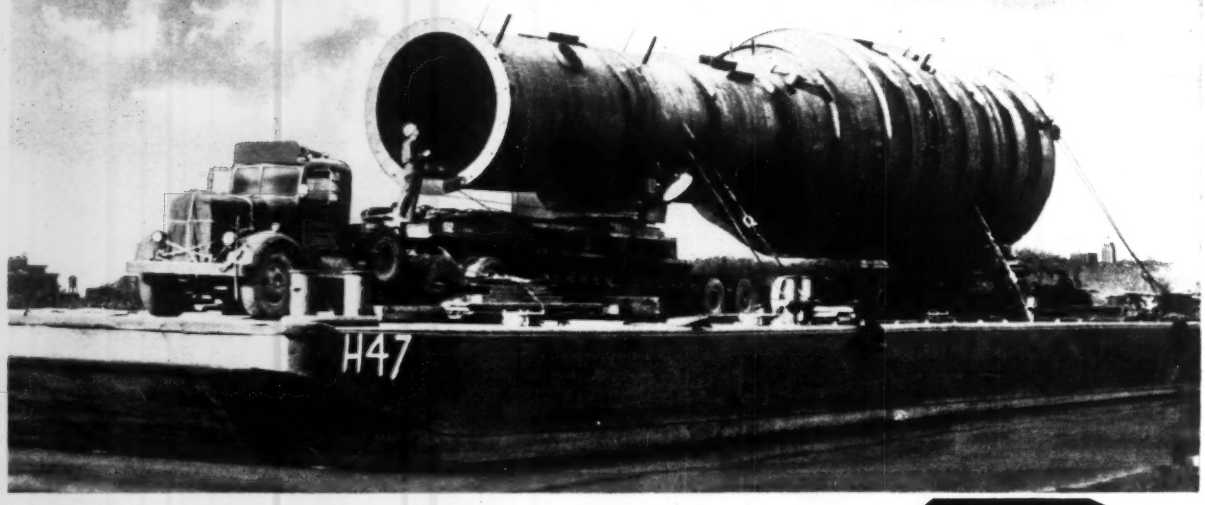

Through The Slough. This 75-ton gasoline "splitter" was made by U. S. Steel's Consolidated Western Steel Division in San Francisco. It was so huge that it had to be shipped on a sea-going barge through an old slough (tidal creek) that hadn't been used for 50 years and was specially dredged out for the journey.

The Mysterious Bends. This "sucker rod" was pulled from an oil well in which the casing had collapsed. This 14-foot sucker rod had been twisted into an 18-inch pretzel, yet it didn't break or even crack! The rod was made by the Oil Well Supply Division of U. S. Steel.

12-Ton Stainless Steel Propeller. A typical Great Lakes ore boat will develop about 4,000 horsepower. But newer models turn out 7,000 hp., and need stronger propellers to harness this extra energy. These blades were made from Stainless Steel: it casts easily, resists fatigue, and is easy to weld.

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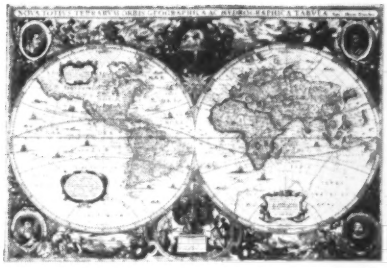

ALEXANDER O. STANLEY, *Editor*
MARION L. WEAVER, *Staff Assistant*

THE VANISHING AMERICAN
IN OVERSEAS PLANTS

MILTON M. MANDELL and ALEXANDER O. STANLEY

Getting a job overseas will be more difficult for Americans in the future. Companies with operations abroad are planning to hire foreign nationals in greater numbers. A DR&MI survey reveals why this trend has developed; what companies look for in people they send abroad; and why some Americans fail in their overseas jobs.

TODAY in U.S. branch plants overseas, the ranks of American managers and technicians are thinning. In Europe, Latin America, the Far or Middle East, Africa—the story is the same: It's the foreign national over the American import by a score of 125 to 1.

And this ratio is going to become even greater in the future, according to the findings of a survey just completed by DR&MI among 93 companies that have a thumping $3.8 billion invested in plants throughout the world. Out of a total overseas payroll of 614,973 in 70 countries, only a small cadre of 4,955 Americans are employed.

This startling fact supports the idea that mental and mechanical skills are a universal commodity. Equally, it refutes the Communist-inspired propaganda that American investments abroad are a subtle form of economic imperialism. As new jobs and new opportunities are created for foreign nationals, the realities and benefits of our system of free enterprise are demonstrated, perhaps more convincingly than they could be through other forms of communication. True, foreign laws and the hard economics of payroll loads have exerted a powerful pressure for use of the hands and heads of nationals, but the fact remains that American management has skilfully employed its training techniques—and has had the courage to back its judgment with an investment of well over $20 billion in overseas plant operations.

Returns on Investment

Has this calculated risk paid off? The answer is found in studying the percentage share of total net profits derived from overseas operations (see detailed tables on page 130). *And well over two-thirds of the reporting companies have been established abroad for more than 20 years!*

Latin America, Canada, and Europe have benefited by the lion's share of investments—accounting for two-thirds of the total. Significantly, the figure for the Middle East is only 6.3 per cent. Obviously poor politics make for poor investments.

The industrial pattern cuts across the board; the companies covered by the survey represent 59 different major or secondary industries; it is interesting to note that the personnel and profit patterns are not dissimilar in the eight service groups reporting.

Why Fewer Americans?

Why are companies using fewer Americans? Aside from the obvious deterrent in foreign laws, the respondents gave these cogent reasons:

1. Foreign personnel is less costly. Salary rates are lower; there are no cost-of-living allowances; no moving expenses and other special fringe benefits, such as paid vacations in

Overseas Contribution to Net Profit	Percentage of Respondent Companies
1 – 10%	41.5
11 – 20%	13.2
21 – 30%	5.7
31 – 40%	9.4
41 – 50%	7.5
51 – 75%	5.7
76 – 100%	17.0

SUMMARY OF DATA FROM DR&MI SURVEY ON OVERSEAS PERSONNEL

Industrial Category	No.	Overseas Longevity					Areas of Activity					Investment	% of profits from overseas operations							Overseas staff	
Italicized references are duplications of the reports of those companies that listed their total activities under more than one industrial category. They are not included in the Grand Total to avoid distortion.	Respondents	1–5 years	6–10 years	11–20 years	21–50 years	Over 50 years	N & S America	Europe	Mid. East	Africa	Far East	Total Overseas (thousand $)	1–10	11–20	21–30	31–40	41–50	51–75	Over 75	American	Foreign
Heavy Construction	5		2	2	1		3	1	2	1	3	$ 2,100	1	1			1		1	342	2,302
Food & Kindred Products	5				4	1	5	5		3	4	75,500	1			1		1	2	58	25,920
Food & Kindred Products	*1*					*1*	*1*	*1*			*1*	*28,000*								*120*	*34,000*
Meat Products	1					1	1	1				21,300	1							30	15,000
Candy & Confectionery Prod.	1					1			1			2,500	1							0	110
Chewing Gum	1				1				1			2,500	1							22	1,050
Textile Mill Products	*2*		*1*			*1*	*1*	*2*			*1*	*28,100*							*1*	*124*	*34,106*
Textile Fibres	*1*						*1*					*100,000*	*1*							*40*	*1,000*
Furniture & Fixtures	2		1			1		1		1		850	1						1	4	116
Paper & Allied Products	1					1	1	1			1	28,000								120	34,000
Converted Paper Products	1			1			1					875	1							1	226
Chemicals & Allied Products	3		1		1		3	2			2	108,700	2							58	1,550
Chemical & Allied Products	*1*					*1*	*1*	*1*			*1*	*28,000*								*120*	*34,000*
Plastic Materials	*1*				*1*			*1*												—	*3,500*
Explosives	*1*			*1*			*1*	*1*	*1*		*1*	*34,500*								*45*	*4,924*
Pharmaceutical Preparations	7	1		1	3	2	7	6	1	3	5	148,900	1	1		1				151	18,948
Cleaning & Polishing Prep.	1					1	1	1			1									14	876
Paints & Varnishes	1				1		1					10,200	1							21	1,079
Natural Dyeing Materials	1				1		1													3	15
Cosmetics	*1*				*1*	*1*	*1*				*1*									*14*	*876*
Chemical Products, General	*1*				*1*	*1*	*1*				*1*									*14*	*876*
Petroleum Products	3	1			1	1	1			1	1	1,500,000							2	1,768	53,942
Petroleum Refining	1				1		1	1			1	5,000	1							8	450
Tires & Tubes	2				2		2	2		2	1	10,000	1		1					200	35,800
Stone, Clay & Glass Prod.	1		1				1													40	1,000
Vitreous Plumbing Fixtures	1					1		1				43,000		1						35	10,000
Porcelain Electrical Supplies	1	1						1												12	220
Concrete Products	1				1		1					2,700	1							23	1,269
Abrasive Products	1					1	1	1		1	1	2,500		1						12	9,988
Asbestos Products	2				1			2			1	1,670								8	14
Refractory Products	2		1		1		1	2				6,000	1							6	3,400
Refractory Products	*1*					*1*	*1*	*1*		*1*	*1*	*2,500*		*1*						*12*	*9,988*
Steel Products	1	1							1			125								60	3
Nonferrous Products	1	1						1				150	1							—	—
Nonferrous Castings	*1*				*1*			*1*			*1*	*670*								—	—
Iron & Steel Forgings	*1*						*1*	*1*				*20,000*								*9*	*3,000*
Cutlery	1					1	1					8,000				1				18	1,273
Machinery (Except Electrical)	1				1		1	1			1	1,650			1					20	430
Tractors	*1*					*1*	*1*	*1*			*1*	*64,000*			*1*					*127*	*30,886*
Construction & Min. Mach.	1			1			1	1				2,000	1							6	100
Construction & Mining Mach.	*1*			*1*			*1*	*1*	*1*		*1*	*34,500*								*45*	*4,924*
Oil Field Machinery & Tools	2	1			1		1	2			1				1					16	118
Machine Tools Precision	1	1	1		1		1	2				7,500			1					13	2,545
Special Industry Machinery	1				1		1	1				300								4	200
Pumping Equipment	*2*				*1*		*1*	*2*				*20,000*								*22*	*3,113*
Industrial Trucks & Tractors	2	2					1	2				1,500	1							12	175
Computers & Cash Registers	3	1			1	1	1	3			1	55,000				1				6	19,494
Sewing Machines	1					1	1	1			1	105,000					1			55	43,857
Electrical Appliances	2			1			1	1			1	1,000								2	22
Electrical Appliances	*1*	1			*1*			*1*												*0*	*3,500*
Telephone & Tel. Equipment	2			1	1		2	1				301,000	1					1		105	100,189
X-Ray & Therap. Apparatus	*1*				*1*		*1*	*1*				*300,000*						*1*		*100*	*100,000*
Motor Vehicles	4	1			2	1	3	3	2	1	4	244,000				1				344	124,805
Motor Vehicle Parts Access.	*1*						*1*	*1*				*20,000*								*9*	*3,000*
Aircraft	1	1									1	100							1	44	2
Aircraft Parts & Equipment	1						1	1				20,000								9	3,000
Railroad & Street Cars	1				1			1												0	3,500
Lab. Engineering Instruments	*1*				*1*		*1*	*1*				*300,000*						*1*		*100*	*100,000*
Mech. Meas. & Con. Instrs.	2		1		1		1	2			1	2,600	2							2	750
Surg. & Orth. Appl. Sup.	1				1		1	1		1	1	26,000		1						6	5,449
Silverware & Plated Ware	1				1			1				400		1						1	60
Mechanical Pens & Pencils	1					1	1	1				800		1						2	200
Toothbrushes	*1*				*1*		*1*	*1*			*1*	*26,000*		*1*						*6*	*5,449*
Steamship Lines (Overseas)	1				1		1					8,400								33	1,647
Airlines (Overseas)	2		1	1			2									1				26	378
Foreign Forwarding	1					1														100	4,650
*Insurance	3				3		3	3	3	3	3	2,500							1	151	5,321
Banks	2				1	1	1	2				7,300	1							61	1,804
Factors	1				1		1	1	1		1									87	1,022
Advertising Agencies	1			1			1	1		1	1							1		15	950
Electric Light & Power	2				2		1					1,000,000							1	675	66,650
Department Stores	1					1														30	120
Mail Order Houses	1			1			1					40,000								116	8,984
Grand Total (units)	93	12	9	10	39	19	62	61	12	18	39	$3,807,620	22	7	3	5	4	3	9	4,955	614,973
Percentage Analysis	100	13.5	10.1	11.2	43.8	21.4	32.3	31.7	6.3	9.4	20.3	100	41.5	13.2	5.7	9.4	7.5	5.7	17.0	.8	99.2

*Includes responses from one group representing 22 insurance companies.

(ADVERTISEMENT)

As a service to its readers, DUN'S REVIEW AND MODERN INDUSTRY prints the following listings which are submitted without recommendation or commitment on its part. Rates for listings on application.

TO BUY

BELGIUM

0168 Wish to purchase direct or obtain agency from U.S. manufacturer of toilet articles, rubber and metal—for pharmacies, household and hardware stores. OFFICE BELGE DE VULGARISATION PHARMACEUTIQUE, S.A., 47 Rue Francois Bossaerts, Brussels 3.

COLOMBIA

0169 Wish to purchase direct machinery to manufacture screen wire for cement. Price quotations desired. FERRETERIA ARGENTINA, MEJIA, HORMAZA & CIA, LTDA. Aptdo. Aereo 556, Popayan, Cauca.

GERMANY

0170 INSTANT COFFEE—WILL PURCHASE DIRECT IN 60-lb. DRUMS.
HEINRICH PAAS,
97 Bruckmann-Strasse, Essen.

HONGKONG

0171 Buy, sell, seek agencies, general merchandise and new products between U.S. or other countries and Hongkong—S.E. Asia. KING'S INTERNATIONAL TRADING CO., Room 306, 14 Des Voeus Rd., C.

INDONESIA

0171a WISH TO PURCHASE DIRECT 250 METRIC TONS OF CAUSTIC SODA.
BERNINA, Kali Besar Timur 2,
Djakarta.

NEW ZEALAND

0172 Wish to purchase direct or establish an agency with U.S. manufacturer of motor accessories. P. E. CLARK & CO., LTD.
603 Colombo St., Christchurch

SWEDEN

0173 Wish to purchase direct or obtain agency for good-quality and modern equipment for snack bars, including grills, juice dispensers, and drink mixers. Descriptive literature and price lists desired as soon as possible. HENNING R. JOHANSSON AB., 33 Stora Nygatan, Goteborg C.

THAILAND

0174 ELECTRIC IRONS AND FANS.
WILL PURCHASE DIRECT.
SIN HUA HUAT, LTD.
5–9 Chakrawad Rd., Bangkok

0175 Wish to purchase direct and agency sought for knitted wear and vests; first- or second-quality men's shirts. P. R. CHAIYABOON & CO., 18 Behind Bank of Canton, Bangkok

TO SELL

DENMARK

0176 Wish to export direct 40,000 annually of true-to-life scale models of domestic, wild, and prehistoric toy animals made of plastic composite material. 200 different specimens; hand-painted in true (non-poison) colors. Can be used as toys or for educational purposes. Price list, photographs and samples available. NEO FORM EXPORT DIVISION, 57–59 Vejlemosevej, Holte.

0176a Wish to export direct or through agent pleasure boats including motor boats and yachts.
NYBORG Baadevaerft og Savvaerk, Baadehavnen, Nyborg.

GERMANY

0177 SCISSORS OF ALL KINDS—600 DOZEN WEEKLY DIRECT. ILLUSTRATED BROCHURE, WERNER PEINIGER, 11 Fuerker-Strasse, Solingen-Ohligs.

0178 LAMPS AND LIGHTING FIXTURES—ALL KINDS FOR EXPORT DIRECT OR THROUGH AGENTS. CATALOG.
THEODOR MUELLER & CO.,
Temdestrasse, Detmold/Lippe.

0179 Wish to export direct or through regional agents $500,000 or more silver table flatware (sterling, solid, plated). Illustrated and descriptive pamphlets available. BREMER SILVER-WARENFABRIK AG, 176 Sebaldsbruecker Heerstrasse, Bremen-Sebaldsbrueck.

0180 Wish to export direct or through agent, tower and other types of clocks, faces, chimes, and accessories. Illustrated leaflets available. TURMUHRENFABRIK BERNARD VORTMANN, 4–6 Hl-Geist-Strasse, Recklinghausen/Westf.

INDIA

0181 ELITE JEWELLERS, P.O. BOX 393, New Delhi. We offer a variety of novelties, curios, gifts; embroidery, silver filigree, ivoryware, woodenware, jewellery boxes. Samples at cost.

0182 Wish to export direct or through agent all kinds of jute products, including burlap, bags, webbing, twine, and canvas—fair average quality. R. N. JHUNJHUNWALA & CO., 9 Ezra St., Calcutta.

ITALY

0183 Glassware for direct export: green and yellow artistic glassware including table settings, ash trays, vases, etc. demijohns, flasks and bottles. VETRERIA ETRUSCA, S.P.A., Empoli, Florence.

0184 ELECTRIC TABLE AND PINUP LAMPS AND SHADES FOR DIRECT EXPORT. LAINPE DI SILVIO GRANDONI, 39, via Faliere, Vezzani, Florence.

JAPAN

0185 Ceramic wall tiles—200,000 sq. ft. monthly; mosaic tiles—150,000 sq. ft. monthly, for direct export. SHINKYO SHOJI CO., LTD. No. 3-3-chome, Sonoi-cho, Naka-ku, Nagoya.

MEXICO

0186 Onyx blocks (unpolished) for direct export in quantities desired: Aztec green, Mexican white, white with wine, and rainbow. Send for price information. MORENO ONIX, Esq. Morelos y 5 de Mayo, Oaxaca.

NEW ZEALAND

0187 Carpets and rugs direct or through agent. Good quality lamb's wool floor rugs, carpets, and skins. DISTINCTIVE PRODUCTIONS, LTD.
10 Woodward St., Wellington.

PORTUGAL

0188 Can supply 300 tons monthly of sisal baler twine; and 150 tons monthly of binder and wrapping twines and sisal ropes. Made exclusively from African sisal fibres. Catalog available. MANUEL DE OLIVEIRA VIOLAS, Silvalde, Espinho.

TO REPRESENT

BELGIAN CONGO

0189 Agency sought for synthetic yarns, such as orlon, dynel, and terylene.
G. VAN HASONBROEK,
B. P., 835 Elisabethville.

0190 Agency sought for plain cotton materials for shirts and printed cotton materials—for African Market. CONGOCOMMERCIAL AGENCIES, (Noorali M. Kassam)

CANADA

0191 AGENCY SOUGHT FOR AUTOMOTIVE PARTS AND ACCESSORIES.
ROLLAND A. GIBSON,
940 LaPointe St., Montreal 9.

COLOMBIA

0192 AGENCY SOUGHT FOR AUTOMOBILE SPARE PARTS. EMANUEL RODRIQUEZ,
Edificio Edmond Zaccour,
Cali.

COSTA RICA

0193 Agency sought from U.S. manufacturers of construction materials.
AGUILAR-BRENES CO.
P. O. Box 71, San Jose.

ENGLAND

0194 Agents required for Laminated Rubber V-Link belting. Prices and deliveries are known to be extremely competitive. Only firms with Power Transmission experience and employing technical salesmen should apply. T. WHITTLE & SONS, LTD., Rose & Crown St., Warrington.

0194a Wish to act as buying agent and shipper of antiques on behalf of U.S. importers.
F. S. ORAM,
21 North End House, London W.14.

FRANCE

0195 Wish to obtain agency for good-quality hearing aids; optical goods and instruments. Please send price lists and descriptive literature. ETABLISSEMENTS SERPO, 7 Rue Chaudrier, La Rochelle, Charente-Maritime.

ITALY

0196 Exclusive agency sought for natural and sugared fruit juices, and canned fruits preserved in syrup. LORENZO LA ROCCA, 59 VIA Archimede, Rome.

NEW ZEALAND

0196a Wish to establish a sales agency with U.S. manufacturers of artists' materials, or purchase direct. EXCELSIOR SUPPLY CO., LTD., 50–52 Victoria St., Wellington.

SWEDEN

0197 AGENCY SOUGHT FOR COTTON AND NYLON MEN'S SHIRTS.
WENNBERG & WALLIN,
Norrlandsgatan, Stockholm C.

CORRECTION: Inquiry No. 0113, February 1957 issue. A variety of curios handmade from local ebony wood for export direct or through agent. "*Assorted samples $2.80*" should have read "*Assorted samples $28.00*." MOLOO BROTHERS & CO., LTD., P.O. Box 53, Dar es Salaam, Tanganyika.

SYNTRON Vacuum Process

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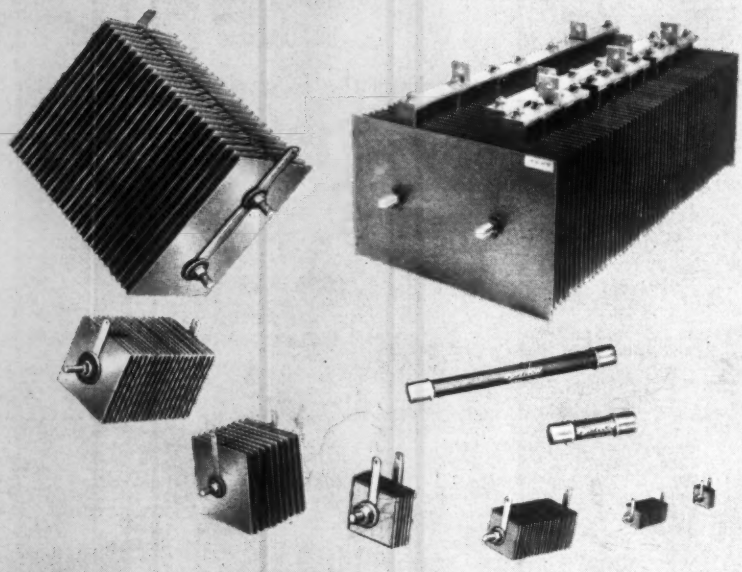

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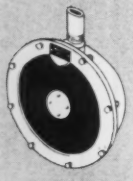

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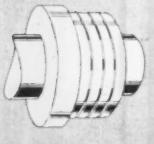

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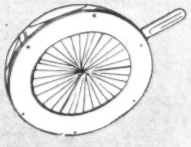

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the United States and rotation; there is lower turnover.

2. There has been a tremendous increase in the pool of experienced and qualified local employees, partly because of training programs conducted by American companies.

3. Employment of nationals fosters consumer good-will and foreign government cooperation.

4. There is a dearth of qualified Americans because of full *domestic* employment and *domestic* expansion.

5. Few Americans know local customs and languages.

6. Companies want to de-emphasize the *foreign* character of their overseas enterprises and weld them more firmly into the local communities.

Transient Executives

Finally, modern methods of communication and transportation make it possible to station relatively fewer Americans abroad, even in top management jobs. In this day of rapid international telephone and airline facilities, it is no longer necessary for many Americans to be physically present to insure conformity with company policy or to provide technical know-how. There has arisen a large new group of "transient executives"—Americans who operate from headquarters in the United States, but travel frequently to overseas locations and provide over-all supervision for them. The adjustments these Americans must make are mainly business adjustments since they do not have to *live* in a foreign culture. They will, however, be better supervisors because of the exposure to the problems of living and working overseas.

The Case for Transfer

Americans interested in overseas employment face another bar: More than one-third of the companies studied do not hire Americans directly for overseas employment—they transfer employees from domestic operations; others both hire directly and transfer.

There are a number of good reasons why transfer from domestic operations is desirable. Because more than 80 per cent of the training programs now being run for overseas service are devoted to orientation to the company, its products, its policies, its methods of operation, part of this training time—often of several

Training in Tokyo: Northwest Airlines teaches modern maintenance procedures.

months' duration—can be saved if present employees are used. Employees are also more likely to be loyal to their employers if service overseas is part of an integrated career with the company. Finally, observation of the trainee while he is working in the United States can, if properly used, be one useful method of determining his effectiveness overseas.

No Jobs Barred to Nationals

As to the range of jobs open to foreign nationals there seems to be no limit. They are being used as managers, salesmen, clerks, skilled tradesmen, and lawyers. If one were to attempt to summarize the attitude of American business on this whole question, it would be that a company should use the *minimum number of Americans* necessary to protect the interests of the owners and hire the *maximum number of foreign nationals.* And if qualified local candidates are not available, training programs should be conducted.

Prior Experience Preferred

But, while the number may be minuscule, almost every company with investments overseas is sooner or later faced with the need to select Americans for assignment to an overseas post. For this reason a major part of this survey was devoted to determining the factors that need to be evaluated in selecting Americans for overseas assignments. The companies were asked to identify the special qualifications they seek. Next to technical competence and knowl-

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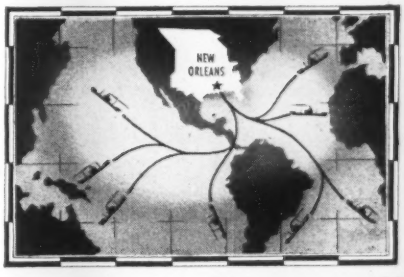

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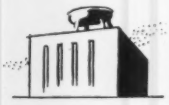

Refrigerator manufacturer wanted to be close to rich Eastern market.

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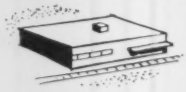

Novelty fabric manufacturer and his associates like the living —boating, fishing, leisurely suburban life, near cultural centers.

Among factors "most important" to world's largest producer of insulation materials was "particularly, the character of people in the community."

Chinaware makers sought intelligent, stable labor pool.

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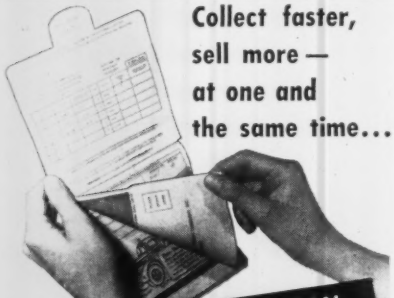

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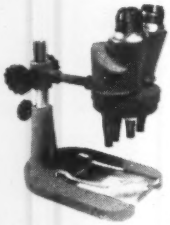

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edge of company methods, the factors most often stressed were: (1) prior overseas experience as an indication of the ability to adjust to different working and living conditions; (2) knowledge of or aptitude for learning foreign languages. Companies also mentioned the ability to work without close supervision, the ability of the wife and family to adjust, the ability to manage and teach (the American overseas is often in a leadership position), good health, emotional stability, flexibility, willingness to travel, and sobriety.

One company said, "We prefer to send our best-qualified employees because there are greater demands placed on these individuals due to foreign customs, less effective communication than in the States, plus lack of functional organizational relationships."

Initiative Important

What are the most frequent differences between domestic and overseas employment? The overseas employee will need:

A. *At Work*

1. To be able to improvise.
2. To learn new customs and procedures.
3. To adopt a different tempo.
4. To cover, more independently, a wider area of operations.
5. To supervise and teach, not do.
6. To use different "selling" methods.

B. *At Home Overseas*

1. To adjust to new living conditions and to do without accepted conveniences.
2. To be able to live in a "goldfish bowl" atmosphere.
3. To find new recreations and make new friends as a substitute for old ways.
4. To meet unsanitary conditions and special climatic problems.
5. To help his family adjust to to a new way of life.
6. To take an interest in learning about new ways of life and new people.

It is obvious that the requirements cannot be met by weaklings, by those going overseas to escape from domestic problems, by those looking for glamor and romance.

Why Americans Want to Go

Why do Americans go overseas? The survey shows that the most frequent reason is to make more money,

either directly or indirectly. They go for more rapid advancement; to obtain lower living costs and servants, income tax exemptions, and fringe benefits. They also go for other career purposes: because it is company policy; to get broader experience; to get into operations; to gain recognition; and because they believe competition will be less keen.

A large number of additional reasons are more personal. They want to see the world; they want adventure and new experiences; they have a foreign wife or a foreign background; they want a new way of living; they want to help improve international relations; and they want to use their previous experience and training more fully. It is hard to tell whether these motives will produce effective employees; that depends on the other characteristics that go along with them. For example, a young man who wants to go overseas in order to get ahead faster may be very superior, while an older person with the same motive may be inferior.

Why Do Americans Fail?

With these motivations, why do Americans fail overseas? Why do they leave? The most frequent reason, companies report, is that the man or his family can't adjust to local conditions and people. The climate affects them; they get bored; they miss their split-level homes and country clubs; they go completely "native"; they over-drink; they don't like non-Americans and their way of life; they can't adjust to new working conditions; they don't like isolation;

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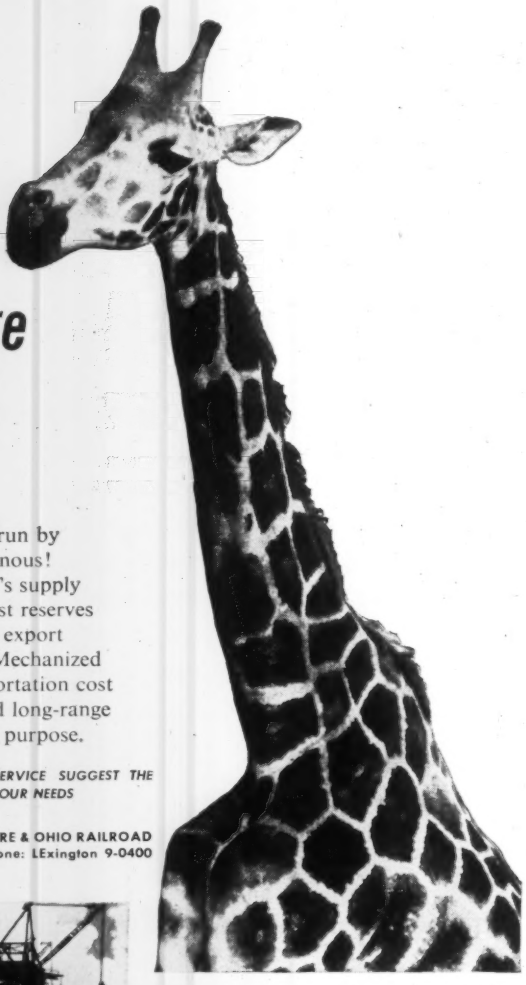

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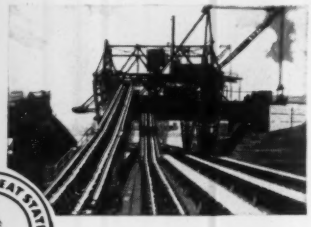

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they start extravagant living; they become depressed and despondent; they worry about international crises; and they get homesick. They also get sick, don't want to travel within their overseas territory, think the kids need an American education, find that emergencies arise at home or that their wives want to return; and they fail to earn and save as much as they thought they would. They get fired because they become complacent, show lack of integrity and management competence.

It is, therefore, no surprise that the lack of qualified Americans is one of the important reasons for increasing use of foreign nationals.

But the turnover rate does not seem high. Half the companies say it is lower than for domestic operations, and only 10 per cent say it is higher.

Selection Procedures

What selection methods do companies use? Mainly they interview the candidates, give medical examinations, and check references by personal or mail inquiries and often by telephone. Four of the 90 companies use psychologists; none uses psychiatrists. About 10 per cent use tests—intelligence, personality, and achievement and aptitude. One uses a foreign language test. Only one reports any special research studies to identify employees who will be successful overseas.

The selection methods used do not seem to indicate any greater care for overseas than for domestic employment. This seems surprising considering the greater costs of overseas employment and the greater latitude for making mistakes. It would seem that, considering the great use of those already employed, sufficient information could be obtained to predict more accurately who will succeed overseas. Another possible source of error is that fewer than 15 per cent of the companies spend any appreciable time in orienting their employees (and the employees' wives) to the special problems of living and working overseas. Few companies report any special attention in the selection process to how well the wife may be expected to adjust.

Personnel Policies

In addition to selection and training, companies with extensive over-

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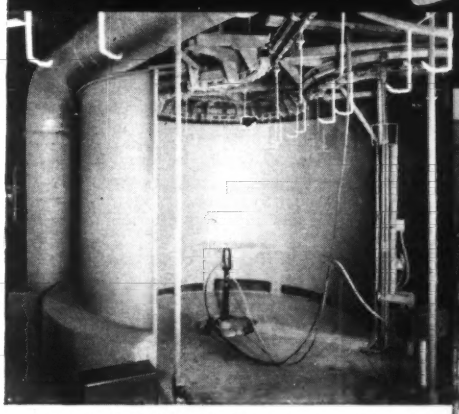
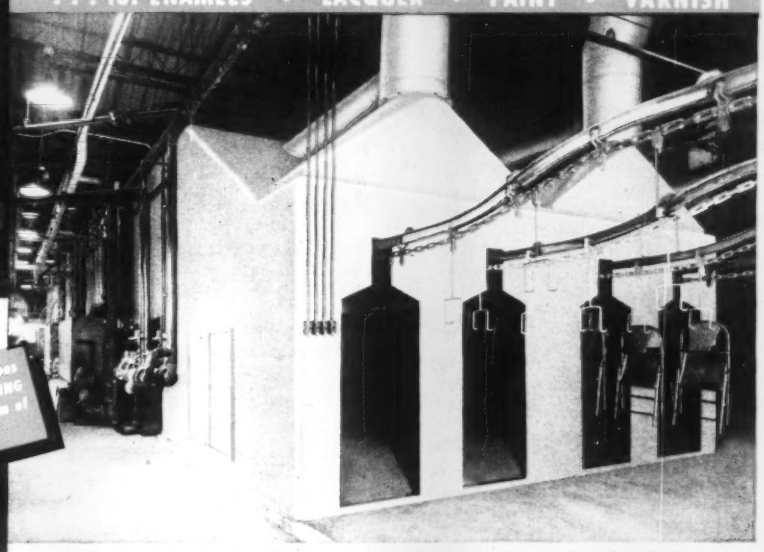
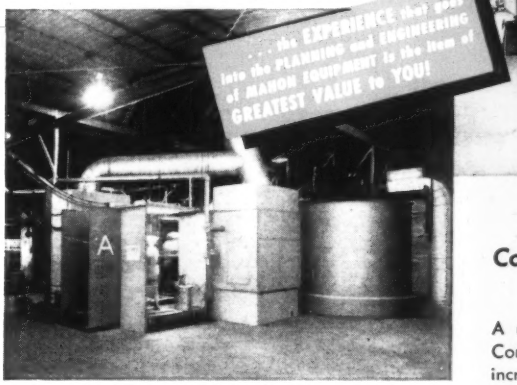


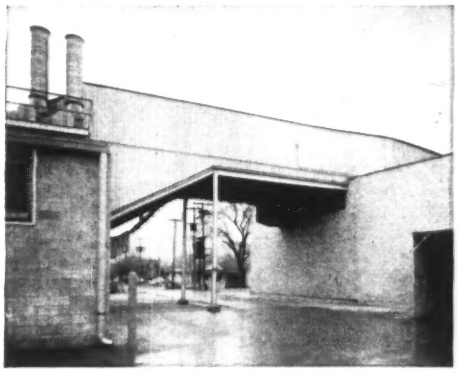
One of the Eight Mahon Ventilated, Circular Electro-Spray Enclosures Employed in the Four Separate Painting Facilities in this System. Note Provisions for Control of Air Movement.



Four-Production-Line Metal Cleaning and Surface Preparation Machine—Part of the Complete Mahon Finishing System in the Durham Manufacturing Corporation's Plant, Muncie, Indiana.



One of the Four Separate Painting Units in this System. Each of the Four Production Lines Passes through an Identical Arrangement —Two Electro-Spray Enclosures and Staggered Touch-up Booth.



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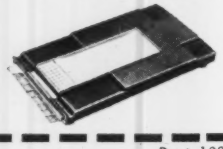

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seas operations need special personnel and administrative policies. About half the companies have a policy of rotating employees from one overseas post to another, while one-third transfer back employees to the United States after a period overseas. About 20 per cent of them have separate personnel and training staffs for overseas operations.

A large number of extra benefits are offered. The most common are extra leave benefits, higher salaries or bonuses, cost-of-living allowances, travel expenses to the United States, and housing and educational allowances for children. Some give extra retirement credit, entertainment allowances, and pay special health and medical expenses.

More than 80 per cent of the companies have a separate division or subsidiary for their overseas operations. Somewhat more than half give their overseas executives greater authority than their domestic counterparts.

Methods of evaluating the performances of overseas employees vary widely. Examination of the profit and loss statements, sales figures, and production costs is a major technique, especially when standards are available. Periodic visits by executives from the United States and visits by the overseas employee to the United States are often used for this purpose. One company uses thorough studies by its overseas personnel division. Another company grades overseas personnel on their reputations in the local community.

Producing in Valencia: Firestone turns out truck tires in its Venezuela plant.

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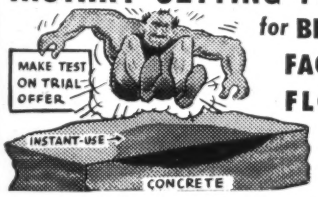

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This review of American operations overseas shows both great progress and the need for better methods. The increasing use of foreign nationals seems advantageous from the point of view of stability and profit. But there is great need for research to develop better methods of identifying those who will succeed abroad. There is need also for better training on overseas life, language, and work habits. The integration of domestic and overseas employment should, in the long run, produce better employees at less expense to the company.

Pay Attention to Local Customs

Finally, some companies need more sophistication about what is and what is not possible overseas. Those who think that American production standards can be maintained in all other countries, those who can see only one right way to do things, and those who blindly follow American methods of organization and control overseas are doomed to frustration. They are as wrong as the American overseas who is unhappy because he can't see the Yankees play each Sunday, and because his wife's servants have to be watched or else they'll forget to wash the pots before putting them away. Operating overseas is different—it can be rewarding, as it has been to many companies, if the essential differences are understood and accepted.

Fit Polices to the Market

In thinking about overseas operations, it is always dangerous to think in the broad terms of overseas versus domestic operations. There are places overseas where an American can adjust without any great difficulty, while living in others is as difficult as living on the moon. Some places, especially Western Europe (with Canada an additional obvious example) require no American on the spot; American subsidiaries or plants are run completely by local people. Actually an American working there may have fewer problems than one who moves to a new area within the United States. But working in lands without a tradition of competitive enterprise as we understand it, where educational facilities are poor, where there is no background of large-scale industrial production, where attitudes toward life are resigned and fatalistic rather

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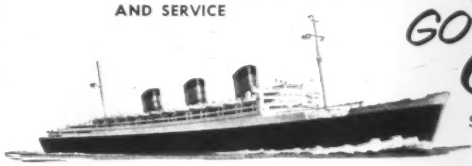

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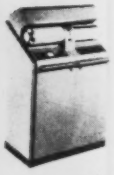

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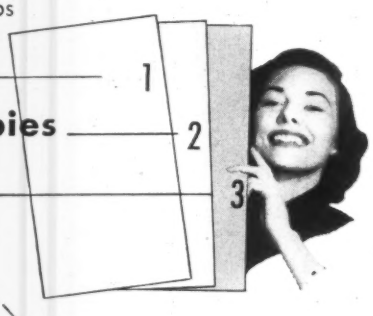

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than personally creative and mobile, where thinking is oriented to the theoretical and speculative rather than the pragmatic, is a great challenge for an American—the best selection, orientation, supervision are required to obtain effective performance under those conditions.

OVERSEAS PERSONNEL PRACTICES

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ABOUT THIS ARTICLE • Co-author of this report, Milton M. Mandell has an extensive background in the field of personnel testing programs. He has served as Chief of the Management Testing Unit, Standards Division, U.S. Civil Service Commission since 1945. He recently served as chairman of several seminars held by the International Management Association on the problems of overseas personnel.

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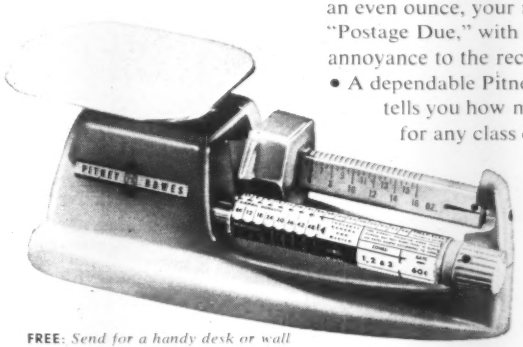

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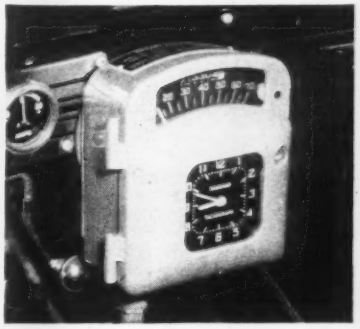

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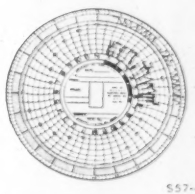

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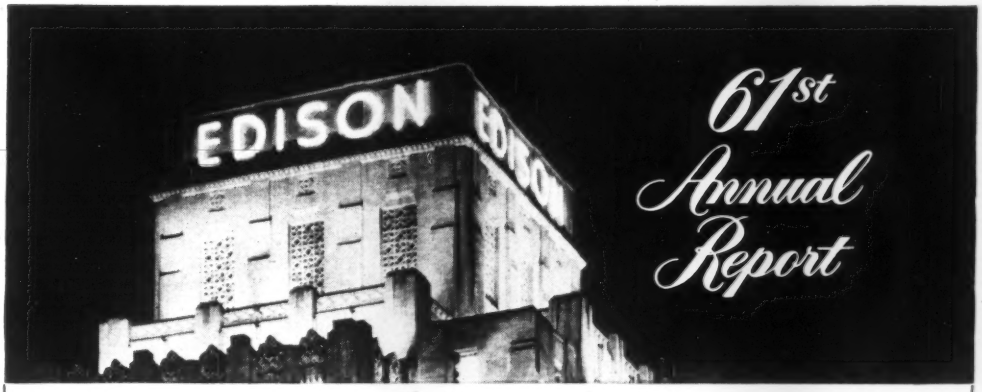


SOUTHERN CALIFORNIA EDISON COMPANY

Earnings per Common share were $3.39 compared with $3.22 per share on a lesser number of shares outstanding at the close of 1955. A milestone in the Company's continued growth was reached late in the year when its total plant account passed the $1,000,000,000 figure. The successful promotion of domestic sales under a vigorous program adopted in 1955 to persuade domestic customers to *live better electrically* was responsible for an increase in their average annual kilowatt-hour use 30% higher than the increase registered in either 1954 or 1955.

We recognize that ours is a continuing responsibility to the dynamic growth of the communities we serve. We shall continue to devote ourselves to the attainment of even greater objectives and in promoting community well-being and that of our customers, employees and investors.

Harold Quinton

PRESIDENT

REVENUE & SALES . . . Gross revenue was $196,446,248 or 10.5% over 1955. Net income increased 14.1% to $33,285,658. Kilowatt-hour sales increased 11.1% in 1956.

FINANCING . . . New money aggregating $93,040,960 was obtained during the year from the sale of 1,200,000 shares of Cumulative Preferred Stock, $40,000,000 of 3⅝% First and Refunding Mortgage Bonds and 500,000 shares of Common Stock.

PLANT EXPANSION . . . Electric plant investment increased $99,122,643 during 1956 to $1,014,315,652. Additional generating capacity amounting to 350,000 kilowatts has been completed. Further capacity totaling 1,150,000 kilowatts is presently under construction or on order.

GENERATION . . . Electric energy transmitted increased 12.2% to over 13.8 billion kilowatt-hours. System peak demand was 2,504,000 kilowatts, an increase of 9.6% over 1955.

CUSTOMERS . . . The 83,718 additional meters connected in 1956 were second only to the 86,899 added in 1955.

Edison

CONDENSED CONSOLIDATED BALANCE SHEET

December 31, 1956

ASSETS		LIABILITIES	
ELECTRIC PLANT	$1,014,315,652	STATED CAPITAL AND SURPLUS	$ 438,544,996
INVESTMENTS AND OTHER ASSETS	9,173,567	LONG TERM DEBT	405,069,600
CURRENT ASSETS	73,807,062	CURRENT LIABILITIES	69,111,067
DEFERRED CHARGES	4,179,555	DEPRECIATION RESERVE	169,039,312
CAPITAL STOCK EXPENSE	3,127,729	OTHER RESERVES AND LIABILITIES	22,838,590
TOTAL ASSETS	$1,104,603,565	TOTAL LIABILITIES	$1,104,603,565

SOUTHERN CALIFORNIA EDISON COMPANY

EDISON BUILDING • 601 WEST FIFTH STREET • LOS ANGELES 53, CALIFORNIA

AN OUTSIDE APPRAISAL

NOT TOO LONG AGO, before an audience of many millions on TV's "The $64,000 Question," a Czech political exile, now an American citizen and a successful business man, gave public testimony of his appreciation of the civil and social benefits of his adopted land. His gratitude was demonstrated factually by his intimate knowledge of the history and geography of the United States, and by his understanding of the political significance of our form of government and its institutions. He was informed on the Constitutional basis of our civil liberties and our civil responsibilities. He understood the delicate balance of rights, privileges, liberties, and restraints that are written into the Constitution. As a man who had observed the loss of the political rights of the individual in an autocracy, he properly appraised the value of these rights to the citizen, and exhibited a wholesome respect and affection for a country where the freedom of the individual commands the loyalty of the individual as a fair exchange. To the native-born it was a conscience-tingling incident, one that stirred many citizens to ask, "How worthy am I of the privileges and rewards of citizenship?"

On the same program, two Italian shoemakers, prize-winning specialists in opera, demonstrated their devotion to an adopted land. They came here under economic rather than political pressure, but their affection for their new home was just as intense as that of the Czech. There have been others seeking a haven in America who have been less appreciative but, in the main, the citizen who is here by choice rather than birth is an asset and credit to our country, and is eager to admit his gratitude and to stand up and be counted in any national emergency whether as a soldier or as a citizen.

Values are best determined by contrasts. The standard of measurement for personal and political freedom begins with tyranny, in which the individual has no status, and ends with anarchy, where the individual has no restraint. In between is the condition of government by consent, which has many designs within the concept of democratic rule.

A nation in which the individual is given freedom of expression, action, and even criticism not only asks for loyalty among its citizens, but expects love and devotion, if not the type of spontaneous affection shown by immigrants. They appreciate new opportunities in education and business. They revel in the chance of entering competitive trade, and usually invest a sturdy mind and body in the career selected. Freed from the political and traditional shackles of an old world, they seek rewards, both material and cultural, that belong to honest and consistent effort.

The lesson for the native-born is apparent. He often takes too casually all the inherited benefits of citizenship. The hard-earned is the most appreciated. It might be well for industry and education to remind one another of the need to encourage the study of history, in relation to our social and economic progress. We occasionally need a point of reference from which to measure values achieved and goals projected. With a proper historical perspective, we should not only respect the vision and sacrifice of the men who established our form of government, but even exhibit some of the unashamed devotion of the newcomers to our shores, whose point of reference is much closer than that of the native-born, who is apt to take too much for granted from a generous uncle in a silk hat.

The Editors

These are just a few of the items of complete telephone service. A package can be made up for your own particular needs at home or in the office.

A Bigger Package of Telephone Service

New services and equipment have been developed to meet trend to greater comfort and convenience

One of the most significant developments of recent years has been the great increase in comforts and conveniences for more and more people.

Recognizing the trend and alert to it, the telephone companies have been accelerating their efforts to find out, and anticipate, what people want and provide it at a reasonable price. The result is a wholly new concept of what is meant by telephone service.

Where formerly it was thought of as just one black instrument, the modern trend is toward a number of telephones at convenient places around the house.

We have helped this new concept by making new style telephones available, along with color, and with spring cords, illuminated dials, volume control, etc.

But the main reason for the success of the idea is that people have found that there is no greater aid to new convenience and comfort than adequate telephone service.

In offices, as well as homes, there is now a much bigger package of telephone service available for everyone.

Working together to bring people together

BELL TELEPHONE SYSTEM

FORESIGHT by CANCO AMERICAN CAN

PLANT SITE by PRR

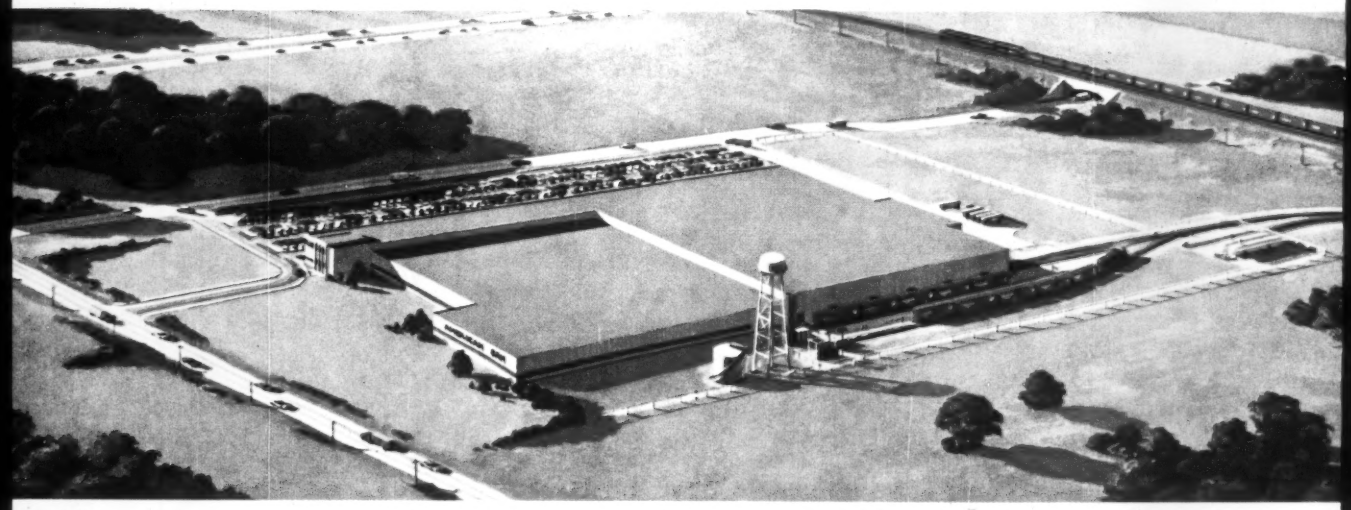
Pennsylvania Railroad was able to offer Canco exactly the site they wanted at Blue Ash, Ohio . . . right on top of principal markets, strategically close to main line rail and highway transportation.

Working hand-in-hand with the local community, PRR's Industrial Development Department assisted in arranging for initial property surveys, soil analyses, labor studies . . . cooperated in extending vital water, power and transportation facilities direct to the site. Advanced planning of switching and siding facilities by PRR will enable Canco to provide Cincinnati area customers with quick, often one day delivery.

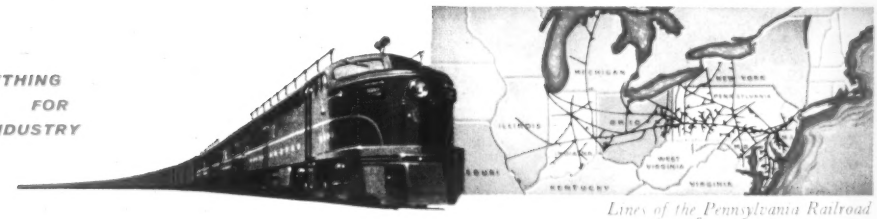
Whether your specific plant site requirements are large or small, PRR offers these and many other services, *as routine* . . . designed to provide you with the optimum location for optimum growth.

All of this is supplementary to the Pennsylvania Railroad's prime purpose . . . *to supply you with the finest direct line transportation in America's most densely populated and richest markets.*

Plan your future in Pennsyland!



EVERYTHING FOR INDUSTRY



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PENNSYLVANIA RAILROAD

BALTIMORE	BUFFALO	CHICAGO	CINCINNATI	CLEVELAND	INDIANAPOLIS	NEW YORK	PHILADELPHIA	PITTSBURGH
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1800 N. Charles St.	405 Seneca St.	Union Station	230 E. Ninth St.	2021 E. 55th St.	Union Station	Penna. Station	Penna. Sta.—30th St.	Penna. Station
MUlberry 5-4800	*CLeveland 5830*	*CEntral 6-7200*	*DUbar 1-3700*	*ENdicott 1-2121*	*MElrose 5-5581*	*PEnna. 6-6000*	*EVergreen 2-1000*	*GRant 1-6000*

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